John Marmaduke Tresdale.

CONCHOLOGY,

OR THE

NATURAL HISTORY OF SHELLS:

CONTAINING

A NEW ARRANGEMENT OF THE GENERA AND SPECIES,

ILLUSTRATED BY

COLOURED ENGRAVINGS

EXECUTED FROM THE NATURAL SPECIMENS,

AND

INCLUDING THE LATEST DISCOVERIES.

BY

GEORGE PERRY.

Plurimus inde Labor, Tabulas imitando juvabit
Egregias, Operumque Typos; sed plura docebit
Natura ante Oculos præsens; nam firmat et auget
Vim Genii, ex illaque Artem Experientia complet.

DU FRESNOY.

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1811.

INTRODUCTION

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INTRODUCTION.

The study of Shells, or testaceous animals, is a branch of natural history which, although not greatly useful to the mechanical arts, or the human economy, is, nevertheless, by the beauty of the subjects it comprises, most admirably adapted to recreate the senses, to improve the taste or invention of the Artist, and, finally and insensibly, to lead to the contemplation of the great excellence and wisdom of the Divinity in their formation. The intricacy of structure, and predisposing arrangement in the greater number of them, are truly wonderful; but in none, perhaps, so much as in the Nautilus, or Sailor shell, which, by being gifted with what answers the purposes of a sail and oars, can raise itself to the surface of the ocean, and skim along it with surprising facility.

There is little doubt that shells were used by the ancients as drinking cups, in the celebration of their religious rites and public festivals, as they are at the present day amongst the islanders of the Southern Ocean: the celebrated purple dye of the Tyrians, so often noticed in the writings both of poets and historians, was procured from a shell;* and from the same source may have been derived many of the richest and most elegant ornaments of ancient architecture, amongst which may be reckoned the Vitruvian scroll, and the frett of a square form, at present so very general in mouldings and other decorations, since the prototype of these forms are to be found only in certain species of shells; neither is it improbable, that the first idea of the obelisk was borrowed from the genera Cerithium, Terebra, and Aculea; while the Trochus may have suggested the pyramid, as no two forms whatever can be more similar. But the most remarkable coincidence of all, is in the form of the Ionic capital or volute of the Grecian architects, which is obviously an adoption of that of the Cornu Ammonis, or Ram's-horn, of which we are informed by Sonnini, that amazing large specimens are found inserted in and adhering to rocks; this singular fossil shell, differing in its particular minutiæ from the known recent specimens, in the circumstances of shape, and its vast size, may very properly be classed under the genus Argonauta. But, not to indulge farther in conjectures, I shall proceed to state the arrangement under which the shells delineated in the present Work are placed.

The families of shells may be classed very conveniently under the two principal characters or divisions, of *Univalves* and *Bivalves*.†

* Under the genus Polyplex, in the following work, is delineated a shell found upon the eastern coasts of the Mediterranean Sea, which, from the most probable accounts of its colouring powers, may be supposed to be the ancient Tyrian Murex; and the appearance of the shell in some degree tends to confirm this opinion, as it is richly striped with purple internally.

† The shells, or rather animals, described by former authors under a separate division, (by the name of *Multivalves*,) it seems impossible to denominate shells; for, strictly speaking, they must be considered as horny

Univalves (as the name denotes) are those shells which have only one external covering; such are the Whelk, Murex, or Conch kind. Bivalves are those which are more complicated in their form, having two external coverings united by a hinge, consisting of, or joined to, certain teeth, which are various in number; and the form of these taken together constantly mark the distinguishing character of each genus; for instance, the Oyster (Ostrea) from the Muscle, or the Pecten or Scallop from the Cardium or Cockle.

Of the Univalve shells, the Murex, Plate I. is the first described, and, in order to mark its peculiarities of character as distinctly as possible, and to distinguish it more clearly from others which much resemble it, a Supplementary Plate, No. LIV. is added. Plate III. Monoplex, consists entirely of a genus lately discovered in the Southern and Indian Seas; it has a membranaceous ridge or projection placed longitudinally upon the body. The Biplex has two of these, one on each side of the shell, the Triplex three, the Hexaplex six, the Polyplex more than six and less than twenty; but the genus Septa differs from all these, by having the ridge placed irregularly and alternately on the body and folds of the spire.

In all the genera which follow the above, the forms of the mouth, the spire, and the beak, are made collectively to point out the distinguishing characteristics of each. Amongst these are several, which I have adopted from the ingenious and acute observations of Messrs. Bruguière and Lamarck, authors of acknowledged eminence in the delightful and instructive path of Natural History. Where Linnæus's generic characters appeared to rest upon a solid and indubitable foundation, I have adopted his names and definitions, though not without conceiving, that the genera might have been made more numerous.* The genus Murex of the latter writer is for the greater consistency, truth, and perspicuity, now altered, and divided into several different genera; the Bulla, Voluta, Strombus, &c. have undergone the same necessary extension and revision; and the Helix, Natica, Pomacea, and Nerites, are divided from each other for the first time, their difference of shape being peculiar and decisive.

Of the Bivalves, the Ostrea is divided into two genera, Pecten and Ostrea, a change which has long been a desideratum with the most eminent Conchologists. The genus Pholas is included also amongst the Bivalves, from its great resemblance to them in form, and its supplementary valves being considered as irregular membranaceous appendages, and not always found to be attached to this curious shell. The Univalve and Bivalve shells are found indiscriminately scattered over the various coasts of the ocean, and the largest are to be met with only in the Torrid Zone; but in the seas which lie adjacent to the North and South Pole, the coldness of the temperature seems to operate in reducing the size of animals, and of shell-fish particularly. The largest shell at present known, is the Chama Gigantea, a Bivalve, about three feet in length, one foot and a half in breadth, the shell itself being four or five inches thick.

membranaceous animals, partly elastic, attached to other substances, by a flexible skin or base; such is the Chiton, the Balanus, the Lepas, and the Sabella. These certainly have neither the appearance or the conformation of shell-fish, since, by the discoveries of Mr. Hatchett and other writers, it is found upon a chemical analysis, that their coverings are not testaceous; they also seem to form a gradation rather to the class denominated Vermes, nor do they in general possess the power of loco-motion. The Pholas is classed with the Bivalves.

* In the Index at the end of this work, the different genera adopted from the above writers are marked; and also those now introduced for the first time.

In the delineations of all the Univalve shells, I have adopted that manner of viewing them, which is most favourable for shewing the character of the mouth, the part, of all others, of principal use in determining and ascertaining the genera. Within the mouth is always placed the columella, or little central pillar, which is joined to the beak, or opening at the base, and forms by continuation, a screw in the centre of the spire, closely covered up by the circular folds of the summit. In the Murex, the columella is only slightly fluted, or tending to that form; but in the Voluta, Volutella, and Buccinella, it is in form a screw very strongly marked; in the Pleurotoma it is quite smooth. In short, the *character* of each genus is chiefly determinable by its exterior form, and the *species* in a great measure fixed by the size and the colour of the shell. In the Patella, the circumstance of the difference of colour is particularly remarkable, and determines, along with the roughness or smoothness of the covering, the specific character to which it is naturally allied. The genus Argonauta has its volute centrally involved upon itself, and ending rather abruptly in the rounded middle, in this respect differing from the Planorbis, in which the curvature is always raised externally.

The genus Columna, although it considerably resembles the Helix, has characters peculiarly its own; for instance, its lengthened form and the foldings of the spire, revolving the opposite way to most others in nature, constitute what is denominated a Heterostrophe shell; in this respect it seems to be unvaried, yet other genera have sometimes, from accident, this singular direction. The Trochus is distinguished from the Turbo, chiefly by the square character of the mouth, and from its position being underneath the shell, whereas in the other it projects in front. The genus Bulla is clearly distinguishable from the Cymbium, by not having its spire standing out, but reverted into the cavity or body, in a way something similar to the Cypræa, which has the cheek, or maxilla oris, inserted in a like manner.

Of the Bivalve shells, different perspective views have been given of their forms, for the purpose of explaining those irregular and cycloidal curves which frequently occur in this tribe; the same shell being often flattened in one direction, and circular in another; the character of the genera is taken entirely from the form of the hinge and the teeth, which it is much easier to describe than to delineate; but the circumstance of some of the Bivalves being wholly without teeth, and having only an external hinge, leaves this part of the subject in less certainty, than in the Univalve division. To remove this serious difficulty, some modern writers have proposed to class the Bivalves by genera drawn from their external forms, and it is not impossible, but at some future period the additional discoveries of new species or genera, particularly of those in a fossil state, may throw an additional light upon the subject, and be the ultimate cause of a new Methodus Generum of this part of the science; for, as our knowledge of Natural History is progressive, it is certain that all descriptions or systems must be progressive likewise, subject to be enlarged and amended, rescinded and altered, in proportion as that knowledge becomes extended.

The difficulties of the science of Conchology seem to have arisen from the extensive number of different forms, and at the same time the awkward and imperfect delineations which have generally accompanied works written on this subject. The multitudinous Plates of Lister, Martini, Pennant, and Da Costa, taking either a wider or more confined range through this difficult, yet precise branch of natural History, impart only to the reader representations ill executed, and descriptions worse

conceived, since almost every individual shell has been classed under five or six different genera, in proportion to the number of errors, or the misapprehension of each. To remedy these defects, to give a greater degree of truth and elegance to the delineations of the objects themselves, added to what, it is trusted, will be found a correct description, has been the great object of the author of the present Work, which is the result of several years study; how far he has succeeded, others must determine. With an ardent desire to promote the science of Conchology, and to contribute to the improvement of the Fine Arts, he now presents his labours to the public, to whose judgment he cheerfully submits them, conscious that the impartial and liberal critic will award him that praise to which they shall justly intitle him, and to no other does he look forward.

The Plates are engraved, and coloured after the original drawings, by Mr. John Clarke.

January 1, 1811.

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UNIVALVES.

PLATE I.

Genus. MUREX.

Character. A spiral shell, tuberculous; in form oblong, acuminated; the cheek of the *mouth* standing straight forwards; the *spire* without sutures; the *columella* twisted; *beak* bent outwards.

Species.

No. 1. MUREX AURANTIA. *Shell* of a bright orange colour, divaricated with numerous streaks of dark red; *mouth* of a pale brown. Native place unknown.

No. 2. MUREX LIGNARIUS. *Shell* of a bright orange colour, shaded with streaks of purple and white in an unequal manner; the *mouth* fluted; the *columella* having ridges or folds in its volute; *colour,* pale yellow or brown.

No. 3. MUREX TRAPEZIUM. *Shell* of a pale purple colour, invested with streaks of black and orange colours; *columella* partially fluted; *mouth* streaked with red lines.

No. 4. MUREX BANDATUS. *Shell* of a dark brown, banded with a double line of white upon each folding of the spire; *mouth* of a pale brown.

No. 5. MUREX BANDARIUS. *Shell* of a dark brown, banded with three bands of white and one of red on the first folding of the spire, and with two of white on each of the others; the *mouth* purple, streaked with brown.

REMARKS.

THE history of those Shells which are placed by Linnæus, Knorr, and Gualtieri, in the family or genus of Murex, has been much confused by the number of synonyms, and the imperfections of description. To make this path of Natural History more easy, I shall begin with this genus, of which so much has been written, and of which so little seems to be precisely understood. The word *Murex* is taken from a term used by Virgil, to describe the famous shell that was anciently found upon the coast of Phœnicia, and which afforded, by means of an animal juice, the splendid and costly purple dye of the Tyrians. This shell, however, it will hereafter be shewn, is of another form, and belongs properly to the genus Polyplex, although resembling in many respects the Murex, which may be called indeed its relative. The true Murex, undoubtedly, varies very much in itself, sometimes having a very long spire, and equally as long a beak, for which reason some writers have been inclined to name them the Fusus or Spindle; but as some of the Murices are, gradus per gradum, shorter in respect to the above parts, such a discrimination seems to be quite uncertain and capricious. It will be observed, that in this Work the distinctions are founded chiefly upon the *mouth* and *spire*, whereby we may obtain a more certain and indubitable criterion.

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UNIVALVES.

PLATE II.

Genus. MUREX.

Character. A spiral shell, tuberculous; in form oblong, acuminated; the cheek of the *mouth* standing straight forwards; the *spire* without sutures; the *columella* twisted; *beak* bent outwards.

Species.

No. 1. Murex polygonus. *Shell* of a bright red colour, approaching to brown, interspersed with waving lines of dark red; *columella* partially ridged; *mouth* of a pale brown.

No. 2. Murex babylonicus. So named from a supposed resemblance to the Tower of Babel. *Shell* white, and spotted irregularly with large and small square spots of a brown colour; the cheek of the *mouth* jagged, as if broken or torn away; the inside white.

No. 3. Murex variegatus. *Shell* white, irregularly streaked with waving lines of red; inside of the *mouth* partially fluted with narrow streaks; the tubercles of the *spire* very prominent.

No. 4. Murex forceps. *Shell* pale brown, inclining to an olive colour, strongly decussated with deep waving ridges, extending over the whole surface; the sides of the *beak* very straight; the cheek of the *mouth* deeply fluted.

No. 5. Murex colus. *Shell* of a pale red; strongly marked projecting tubercles of a white colour fenced with dark red; the *beak* very long; *mouth* of a pale brown colour.

REMARKS.

Several writers have denominated the Murices by the general name of *turrita*, from the supposed resemblance of their spire to a tower. Lamarck, in a late Essay upon the fossil Shells found near Paris, describes, under the general name of Murex, several shells having three ridges in the spire, and a small groove in the maxilla, but which are certainly very different from any recent shell passing under the name of Murex. The character of the genus Murex, as laid down by Linnæus, is such as I have described it above, for which I have indeed quoted his specific name, being unwilling to quit so good an authority, unless from an obvious necessity, which I did not at all perceive. Of the threefold shell denominated in this Work Triplex, it is supposed that Linnæus never saw but one specimen, and which he describes with the Murices, calling it Murex ramosus, choosing rather to throw it into that genus; but as many new shells have been recently discovered, the necessity of separating the anomalous ones, and of joining to them the other species, became every day more necessary to the right comprehension of the works of nature.

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UNIVALVES.

PLATE III.

Genus. MONOPLEX.

Character. Shell univalve, spiral, having one fold, or membranaceous division, placed longitudinally upon the body, from hence the name *Monoplex* (or of one fold). The division is not continued farther than the first revolution of the spire, nor is it again repeated, as in the *Biplex, Triplex,* &c. The cheek of the *mouth* is labiated, and furrowed.

Species.

No. 1. MONOPLEX CORNUTUS. *Shell* brown, with a parti-colour division; the *spire* invested with small horns projecting; the *mouth* brown. This curious shell has been lately introduced from New Holland, and is now pretty common.

No. 2. MONOPLEX OBŒSUS. *Shell* brown, flattened at the top; the *beak* long and taper; the *mouth* wrinkled and narrow. A native of the East Indies, and rather rare.

No. 3. MONOPLEX AUSTRALASIÆ. *Shell* of a rich brown, variegated on the mouth with black and white streaks; the *spire* formed at the top into ring-shaped folds. Lately introduced from New Holland, and Lord Howe's Island.

No. 4. MONOPLEX CAPITATUS. *Shell* brown, slightly beaded; the *mouth* convoluted; the *apex* very conspicuous, in the shape of a ball; the *rostrum* very long. Native place unknown.

No. 5. MONOPLEX FORMOSUS. *Shell* of a pink colour, of exquisite symmetry, and pleasing form; the *body* and *mouth* gracefully undulated with irregular bands; the *mouth* pale red or white. Native place, Ceylon and the East Indies.

REMARKS.

THE genus Monoplex is now for the first time distinguished from the Murex, and indeed from all other shells known, having one membranaceous division, which reaches only to the first revolution of the spire, forming a sort of projecting ridge, which may be compared to that of the *Biplex*, *Triplex*, *Hexaplex*, *Polyplex*, and *Septa*, all which are classed according to the difference of number and arrangement of the folds. It will be found that the Monoplex has no membranaceous continuation of the folds in the spire, which all the above named genera have. A careful examination of the natural distinctions, either in the Specimens or in the Plates, will at once serve to distinguish, and determine the appropriate character of each. Add to this, that there are certain natural differences existing in these opposite genera, which add to and confirm the more striking characters, and in which, as in botany, the reader must be referred to the objects themselves, since they elude all other determination. Thus the *Biplex* has a character of flatness, which no other shell has, as if it had been pressed between two weights; and similar peculiarities frequently occur, in which we must be guided solely by the general and defined character adopted from the form and structure.

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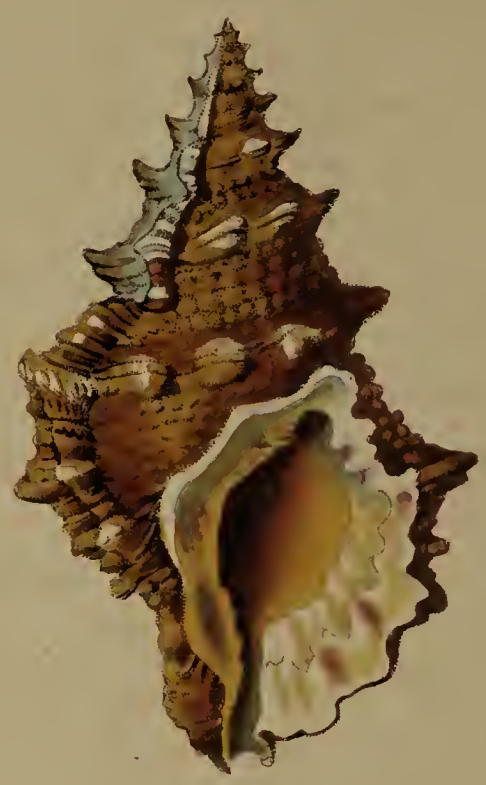

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UNIVALVES.

PLATE IV.

Genus. BIPLEX.

Character. A spiral shell, tuberculous, having two folds or sutures, dividing the shell into two parts: the *shell* rather flattened from the front of the mouth to the back; the cheek of the mouth, formed by one of the folds; the *mouth* round; the *beak* small.

Species.

No. 1. Biplex rosa. *Shell* whitish-brown, richly adorned with tubercles, and rugous furrows; the folds channelled on one side, but not on the other; *mouth* red, and deeply carunculated, of a pleasing rose colour. A native of New Caledonia, and very rare. *From the Author's Museum.*

No. 2. Biplex australasia. *Shell* red, marked on the folds with dark streaks of brown; *mouth* gray, and the *teeth* sometimes double; the *shell* is sometimes covered with a skin or epidermis of a pale green colour, as in No. 4. of this Plate, which makes it appear like a different shell, though in reality the same. This shell is a native of New Holland and Van Diemen's Land, and is now generally known.

No. 3. Biplex tuberculus. *Shell* of a reddish brown, richly covered with pointed tubercles, sometimes found very large. It is elegantly adorned with ridges of beaded tubercles, and forms altogether a rich and pleasing character; it is, however, exceedingly common, and is brought generally from the Cape of Good Hope and the neighbouring coasts.

No. 4. A variety of No. 2, and described under the former head.

No. 5. Biplex perca. *Shell* pale amber colour, richly adorned with tubercles and ridgy spines; the *mouth* of a pale purple. This exceedingly rare and beautiful shell is in the Cabinet of Mr. Jennings, of Chelsea, and was supposed, till lately, to have been unique; but another is now known to be in the possession of Mr. Spurritt, and although not well preserved, confirms the species. The fancy and imagination which are displayed in the singular and fantastical form of this shell are surprising, and can with difficulty be conceived. The series of beads is curiously broken off in the centre, and the fins or spines certainly resemble those of the perch, from which circumstance we have given it the name of *Biplex perca.*

REMARKS.

This description will most probably close the curious and interesting family of *Biplex*, of which no great variety has hitherto been discovered, amongst the recent shells; nevertheless, a curious fossil shell of this genus, something like No. I, has lately been discovered, in the Museum of Mr. Parkinson.

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UNIVALVES.

PLATE V.

Genus. BIPLEX.

Character. Shell spiral, tuberculous, divided into two parts by two folds or sutures, rather flattened from the front of the mouth to the back; the cheek of the mouth formed by one of the folds; the *mouth* round; the *beak* small.

Species.

No. 1. Biplex corrugata. *Shell* of a reddish ochre colour, very much wrinkled and tuberculous; *mouth* deeply indented. Native place unknown.

No. 2. Biplex variegata. *Shell* broad and flat, of a brownish white, elegantly varied with bands of a red colour; the *mouth* very round and engrailed. A native of the West India Islands.

No. 3. Biplex elegans. *Shell* white, mixed with shades of brown, richly spotted intermediately with curious black spots, placed in rows; *mouth* channelled in sluices, and orbicular in its general form. Native place unknown. From the Author's Museum.

No. 4. Biplex rana. *Shell* brown and white, entirely tuberculous; *mouth* purple, the folds ornamented with small horns. It has received the common appellation of Rana, or the Frog, and was formerly regarded as a Murex, to which it has a faint resemblance.

No. 5. Biplex rubicola. *Shell* red, shaded with pink; *mouth* notched at the top, tuberculated wholly from top to bottom; the folds richly variegated with red.

No. 6. Biplex spinosa. *Shell* of a pale brown, richly ornamented with long spines, projecting upwards and downwards in various ways, with a few tubercles interspersed. A native of the African coasts and seas. From the Museum of Dr. Combe.

REMARKS.

The beautiful and singular genus Biplex is here removed and separated from the other genera, with which it had been formerly confounded. When viewed from the upper end of the shell, it seems divided into two parts, by two longitudinal folds, forming a series of joints down each side, and from hence it takes its name of Biplex. Many of the species of this family of shells are very rare, and difficult to procure, particularly the Biplex perca, described in the preceding Plate. All those which have hitherto been discovered are of a roundish form, with a short beak, and certainly possess a degree of beauty quite sufficient to recommend them to the connoisseur.

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UNIVALVES.

PLATE VI.

Genus. TRIPLEX.

Character. *Shell* spiral, three-formed, with a three-fold *spire,* armed with leafy *spines,* placed alternately; the *beak* long, and armed with a *calcar* or spur; the *mouth* oval, having a fringed edge.

Species.

No. 1. TRIPLEX FRONDOSA. *Shell* reddish brown, the spines elegantly branched out, variously; the *mouth* of a pale gray. Lately discovered on the coasts of New Holland, and drawn from one in the Museum of Colonel Patterson.

No. 2. TRIPLEX FLAVICUNDA. *Shell* of a purple or black, verging to a brown; *spines* diversified in length and form; *mouth* of a bright yellow, lined with gray. A native of New Holland. From the Museum of Dr. Combe.

No. 3. TRIPLEX ROSARIA. *Shell* red, interspersed with pink-coloured lines; the *spines* blunted, and reverted very suddenly; the *spur* and *beak* richly ornamented with elegant ligatures; *mouth* of a pale gray. The original, in Mr. Bligh's Collection, is from the Island of Ceylon.

No. 4. TRIPLEX RUBICUNDA. *Shell* black, faintly verging to a brown, the *mouth* of a beautiful red, forming a delightful contrast, lined with purple. A native of Amboyna and the Persian gulf. In the Museum of Lord Valentia.

No. 5. TRIPLEX ABORTIVA. *Shell* elegantly formed, and of a brown red; the *spines* short and abortive; the *mouth* white. Native place unknown. From the Museum of Dr. Combe.

REMARKS.

THE genus Triplex is almost wholly new to Naturalists, and possesses many beautiful species, at least as far as respects their curious and elegant forms: it appears that Linnæus never saw more than one of these shells, and being unwilling to make a new genus for its insertion, he called it *Murex frondosus,* a circumstance which has led his followers into many mistakes; for nothing can be more opposite to a Murex: witness the beak invested with spines, and the calcar, or reverted spur, which the Murex has not at all. Lamarck, to whom modern Conchology is so highly indebted, has, notwithstanding his usual accuracy, out of respect to Linnæus, we suppose, adopted his mistake, and having discovered an elegant fossil Triplex, has erroneously named it *Murex tripteris,* an error which we hope to see amended in a future edition of his Systema Generum. It has already been observed that the beak is generally ornamented with spines; these are usually three in number, and sometimes more, as the species vary; but the calcar or spur is always uniform, and placed in the opposite side. In the Systema Generum, therefore, which will be inserted in the Index to the present Work, this new and interesting genus will stand in the third place, answering to its own name, Triplex, and immediately succeeding the Biplex genus.

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UNIVALVES.

PLATE VII.

Genus. TRIPLEX.

Character. *Shell* spiral, three-formed, with a three-fold *spire,* armed with leafy *spines,* placed alternately; the *beak* long, and armed with a *calcar* or spur; the mouth oval, having a fringed edge.

Species.

No. 1. TRIPLEX FLEXUOSA. *Shell* white, and variegated with red; the *spines* twisted in different ways, and irregular. A rare species from New Zealand, in the Author's Museum.

No. 2. TRIPLEX DENUDATA. *Shell* of a bright red, streaked transversely with red lines; the *spines* very small, and hardly visible; the *mouth* white. A native of Van Diemen's Land. From the Museum of Miss Barford.

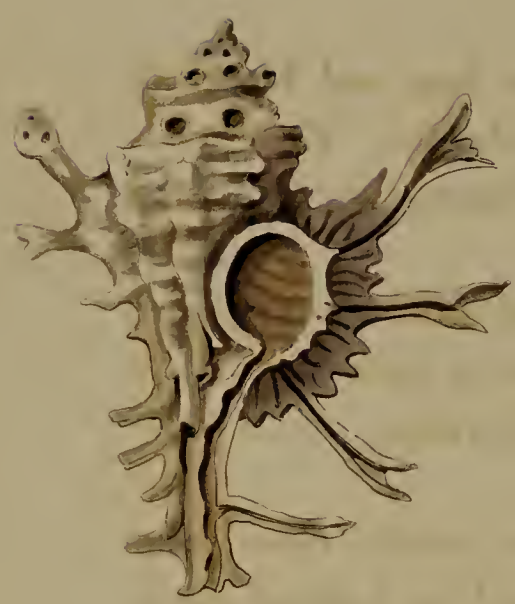
No. 3. TRIPLEX CORNUTA. *Shell* pale yellow, with red veins; the horns resembling those of a young heifer, blunt at the extremities; *mouth* white. Native place unknown. From the Museum of Mr. Adkins.

No. 4. TRIPLEX CORNU-CERVI. *Shell* brown, with a white *mouth;* the *spines* resembling a stag's horn. A native of the South Seas.

No. 5. TRIPLEX PINNATA. *Shell* white, slightly tinged with purple; *mouth* white. This shell has a strong resemblance to two fossil species of Triplex which have been lately discovered, but which have not so large a furbelow. Its native place is unknown; but it is supposed not to be very rare, as two or three specimens have occurred at different times.

REMARKS.

THE genus Triplex presents the most elegant forms to the eye, of which the diversity is truly surprising. It is not improbable that the horns may serve as a weapon of defence or annoyance, or to facilitate the motion of the animal from side to side. They have been little known or described until within these last twenty years, during which the discovery of the islands in the southern latitudes has opened an amazing field for the investigation of the Naturalist. The Triplex forms the connecting link between the genus Biplex and Hexaplex, both of which it much resembles, the first in its undulated mouth, and the second in its calcar or spur, inserted on the beak. It may perhaps be reckoned amongst the most interesting and beautiful of our modern discoveries in Conchology.



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UNIVALVES.

PLATE VIII.

Genus. HEXAPLEX.

Character. *Shell* univalve, spiral, divided longitudinally by six folds, from whence its name is derived; these folds are membranaceous and tuberculous, and sometimes spreading out into branched horns; the *mouth* round; the *beak* long, and armed with several *calcaria* or spurs, in a similar manner to the genus Triplex.

Species.

No. 1. HEXAPLEX TENUIS. *Shell* brown; the *spines* some long and branched, some short and round; the *mouth* gray, with a white border. This curious shell is a native of the South Seas, and is from a specimen in the Collection of Mrs. Bligh.

No. 2. HEXAPLEX ANATOMICA. *Shell* white, slightly tinged with a blue or purple effect: the *spines* very irregular in their form, some of them resembling a death's head, others very short. A native of the East Indies. From a specimen in the Collection of Lord Valentia.

No. 3. HEXAPLEX FUSCA. *Shell* brown, with flattened and divided *spines;* edge of the *mouth* white, inside brown. This curious shell has a distant resemblance to a cart-wheel or to a wind-mill. It is drawn from an excellent specimen in the Collection of Mr. Jennings of Chelsea.

No. 4. HEXAPLEX FOLIACEA. *Shell* white, having six brown folds or septæ, richly diversified, and adorned with leafy branching integuments. It is difficult, nay almost impossible, to do complete justice to the beauty of this graceful and interesting shell; it has so charming a variety of form, and is so richly and curiously ornamented. It is drawn from a valuable specimen in the Museum of Dr. Lettsom at Camberwell.

No. 5. HEXAPLEX PUNCTUATA. *Shell* of a yellow brown, spotted with dark brown; edge of the *mouth* white, and slightly denticulated. Native place unknown.

No. 6. HEXAPLEX OVATA. *Shell* brown, with a white *mouth,* the form singular, and nearly oval; *spines* very short and irregular; the *beak* quite straight. A native of the South Seas, and very rare. From the Museum of Mr. Spurrit, Lambeth.

REMARKS.

THE shells which constitute the genus Hexaplex have a striking analogy to those of the Triplex genus already described, and to the Plates of which we refer our reader; the difference consists almost wholly in the number of septæ, or divisional folds, of which the Triplex has only three, and which of course makes a difference in the beak and the calcaria, or spurs, attached thereto; it differs materially from the Polyplex genus, in the same respect of folds, the Polyplex having, as its name denotes, a great number of folds placed on its body and spire. The shells of this family are chiefly found in the South Seas, and exhibit much elegance and singularity of form; many fossil shells, however, of the genera Triplex, Hexaplex, and Polyplex, have been found both in France and England, though differing in their exact specific form from any at present living; a circumstance which would seem to confirm the general opinion that the Deluge was universal; since we discover shells deposited in the earth in various parts of Europe, of which living specimens are now only to be found in the most distant seas.

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UNIVALVES.

PLATE IX.

Genus. POLYPLEX.

Character. *Shell* spiral, protuberant, having many folds or plicæ, thickly placed on the spire, body, and beak; *mouth* round, and slightly angular, ending gradually in a channel.

Species.

No. 1. Polyplex purpurascens. *Shell* tuberculous, of a green colour; *mouth* purple, with deep stripes of black; the *cheek* angular and protuberant. This curious shell is found plentifully upon the coasts of Tyre and Sidon, and is undoubtedly the one which yielded the celebrated Tyrian dye of the ancients; the fluid which formed this dye is contained in a small vesicular bag. Delineated from a specimen in Lord Valentia's Museum, which was brought over by his Lordship from the Mediterranean Sea.

No. 2. Polyplex rugosus. *Shell* brown, tuberculous; the *mouth* rather narrow, acuminated, white, inclining to purple. Drawn from the Collection of Mr. Cracherode, now in the British Museum; it is rare, and a native of the Southern and Pacific Oceans.

No. 3. Polyplex crenatus. *Shell* yellow, formed into longitudinal folds; the *mouth* white, shaded with brown. Native place unknown. From a specimen in the Author's Museum.

No. 4. Polyplex gracilis. *Shell* white, shaded with brown, of a very elegant form. This beautiful shell is found upon the coasts of New Zealand. From the Museum of Mr. Humphrey.

No. 5. Polyplex bulbosa. *Shell* white, shaded with brown; the *mouth* dark brown; the *body* richly foliated, and decussated. This shell differs materially from the former in the ridge of the mouth, and the line of the body, the form of which is beautifully undulated. A native of the Indian Seas.

REMARKS.

The genus Polyplex (so denominated from its numerous folds or membranaceous divisions), is remarkable rather for its singularity than beauty. Though the species of this genus at present known are very few, yet these are so distinctly marked by the most obvious and indubitable characters, as absolutely to require a new and distinct genus; but, it is possible, that by the recent discoveries in the southern regions of the globe, where this shell is chiefly found, many more species may perhaps be brought to Europe, which will be highly interesting to the future Conchologist, and the reader will now easily recognize, by the present genus, under what head he is properly to class them.

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UNIVALVES.

PLATE X.

Genus. DISTORTA.

Character. *Shell* spiral, each revolution of the spire unequally placed, and gibbous, or bellying out; *mouth* resembling a cavern, and, together with the *maxilla oris,* carunculated all over, and armed with numerous teeth on each side. Only two species are at present known, which are the following:

No. 1. DISTORTA ACUTA. *Shell* yellow, and covered with hollow reticulations, similar to net-work; *mouth* brown, having a curious flap expanded on each side. A native of New South Wales.

No. 2. DISTORTA ROTUNDA. *Shell* red, with a white mouth; inside brown; the *mouth* invested with a curious flap, which is scutellated, or edged like an ancient shield; the *spire,* like the other, equally irregular in its form. A native of the Southern Ocean.

Genus. ROSTELLARIA.

Character. *Shell* spindle-shaped, or sub-turreted, ending at the base in a canal, stretched out like a sharp beak; *cheek* joined to the spire; *lip* whole, or denticulated, increasing by age; a lacuna near to the canal.

Species.

No. 1. ROSTELLARIA SINENSIS. *Shell* spiral, and variegated with red and yellow; *mouth* contracted, and placed under the body. This shell is found in the Chinese Seas, and sometimes attains to a large size.

No. 2. ROSTELLARIA PES-PELICANI. *Shell* turreted and spiral; the *lip* spread out like a sail, and divided into three points; the back of it resembling the foot of the white Pelican. It is a native of the British Seas, and the Hebrides, or Western Isles.

No. 3. ROSTELLARIA DENTULA. *Shell* red; the channel at the top of the mouth very large and obvious; the *cheek* furrowed at the edge into five or six teeth. This curious and rare shell is a native of the East Indies. From the original in Dr. Combe's Museum.

REMARKS.

THE genus Distorta is remarkable in its form, and so unlike any other at present known, as fully to justify the placing it apart from all others. The inequality of the spire is its principal characteristic, next to which is its singular mouth and lip, of a form different from all other known shells. The genus Rostellaria bears a distant analogy to it, as does the genus Septa, in respect to the spire. I have adopted the idea of Lamarck, in removing the genus Rostellaria, from its original parent, STROMBUS, as indeed it would not range conveniently either with the Murex or Buccinum. A very large fossil shell of this genus has been described in the Branderian Collection of Hampshire Fossils, and is supposed, when perfect, to have a good deal resembled in its form No. 2 of the present Plate. The science of fossil shells seems calculated to throw an additional light upon the distinctions of the genera, though, in form, they never appear exactly to imitate any of the recent living specimens. This question however is still open to the investigation of the Naturalist, as more specimens may in future be discovered.

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UNIVALVES.

PLATE XI.

Genus. ROSTELLARIA.

Character. *Shell* spindle-shaped or sub-turreted, ending at the base in a canal stretched out like a sharp beak; *cheek* joined to the spire; *lip* whole or denticulated, increasing by age; a lacuna near the canal.

Species.

No. 1. ROSTELLARIA RUBICUNDA. *Shell* spiral, tuberculated, of a bright red colour, invested with ridges near the beak, of a yellow colour; *mouth* yellow, and slightly striated. A native of Guinea.

No. 2. ROSTELLARIA SERRATA. *Shell* of a pale flesh colour, verging to a brown; upper end of the *mouth* terminating in a lacuna or trench, which reaches almost to the top of the spire; on the maxilla oris are eight spines, and opposite to the first turn of the spire three spines, succeeded by three others, after which a serrated process reaches nearly to the top. This most curious shell is a native of the East Indies, and very rare.

No. 3. ROSTELLARIA SINUATA. *Shell* of a pale brown; and the maxilla oris forming a waving line; the *mouth* yellow, and the turns of the spire divided by a channel. Native place unknown.

No. 4. ROSTELLARIA FISSURELLA. *Shell* of a brown colour, with a high ridge, lacunated, reaching nearly to the top of the spire. In its general form, this shell bears a considerable analogy to the genus Scalaria.

No. 5. ROSTELLARIA IONICA. *Shell* of a flesh colour, having about fifteen or sixteen turns to its spire, nine of which are fluted at the upper part, and give a considerable degree of elegance to the general form of the shell; the *beak* yellow, and very pointed; the *mouth*, at the top, ending in a lacuna or canal, is curiously ornamented by a ridge resembling the Ionic volute in architecture. The denticuli or teeth of the mouth are mammillary, or rounded, which adds to the singularity of its appearance and character. A native of Amboyna, and very rare. Delineated from a specimen in the Museum of Mr. Latham.

No. 6. ROSTELLARIA ALA-DRACONIS. *Shell* dark blue, tuberculated; the *mouth* yellow. This shell differs in form and colour from the Pes-pelicani, before described.

REMARKS.

THE genus Rostellaria has so near an affinity to the Linnæan genus Strombus, as not to be easily distinguished from it. The mouth, however, is considerably smaller, the spire different, and, above all, there is not the furrow and usual excavation at the lower end of the maxilla oris, which is always found in the Strombus, and with the beak bent back, which, in this case, is nearly straight. There is also a considerable analogy in the cheek with the genus Cerithium of Lamark, whose distinguishing characters will hereafter be more fully explained, with the reasons which have suggested some deviations from that celebrated and ingenious Naturalist.

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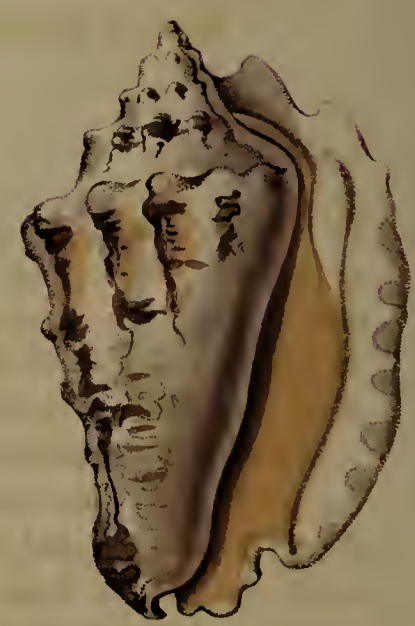

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UNIVALVES.

PLATE XII.

Genus. STROMBUS.

Character. *Shell* spiral: the *cheek,* or *maxilla oris,* turned outwards, and spread out like a flap; the *cheek* is also cut open and furrowed at the top and bottom, near to where it joins the beak; the *beak* twisted inward and backward.

Species.

No. 1. STROMBUS QUADRATUS. *Shell* white, richly streaked with brown; outside armed with tubercles; *mouth* white, forming a striking and elegant contrast. It has been found only in the West Indies.

No. 2. STROMBUS ACUTUS. *Shell* white, but elegantly clouded with red marks; the *mouth* painted with red lines; the channel in the bottom of the cheek curiously twisted. A native of the Pacific Ocean.

No. 3. STROMBUS LABIATUS. *Shell* yellow, with an irregular *spire; mouth* of a rich purple, adorned with lines. Its native place unknown.

No. 4. STROMBUS CORNUTUS. *Shell* of a rich and gorgeous orange colour; *spire* ornamented with straight horns, closely placed in rows, forming a striking and conspicuous effect. This shell has been obtained by our recent discoveries in the South Seas.

No. 5. STROMBUS LENTIGINOSUS. *Shell* white, shaded with brown and purple marks; the *cheek* marked alternately with brown. Native place unknown.

REMARKS.

THE genus Strombus presents a singularity of form and colouring not to be equalled by any other family; some are armed with amazing long horns, as the Strombus chiragra, others plain and smooth; it also contains a subdivision noticed by Lamark in his Account of the Fossil Shells of France, in which the notch or channel at the bottom of the cheek is always wanting; but amongst the recent shells such a deviation has not yet been noticed. These shells are generally thick and heavy, and natives of the warmer regions of the globe; they are remarkable for the gradual enlargement of the cheek, which increases slowly in breadth and size as the animal advances in age. Upon the whole, this genus is easily recognized, being distinctly marked by the peculiarity of the cheek, although the individuals differ much in other respects.

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UNIVALVES.

PLATE XIII.

Genus. STROMBUS.

Character. *Shell* spiral: the *cheek,* or *maxilla oris,* turned outwards, and spread out like a flap; the *cheek* is also cut open and furrowed at the top and bottom, near to where it joins the beak; the *beak* twisted inward and backward.

Species.

No. 1. STROMBUS DIGITATUS. *Shell* brown, striped with white; the *cheek* very much expanded, and divided into ten segments, pointed, rounded, and arcuated; the *mouth* and *columella* richly striped with white and red veins, running the whole length of the shell; the *beak* short. A native of the Eastern Ocean.

No. 2. STROMBUS ACULEATUS. *Shell* of a rich brown colour, tuberculated; the *mouth* of a deep red colour, edged with white, terminating in a very long beak at each end of the shell; the *cheek* armed with five long curved claws. Native place unknown. From a shell in the Collection of Mr. Latham.

No. 3. STROMBUS SINUATUS. *Shell* of a brown colour, having five claws curiously undulated, one of which covers and takes up the place of the spire; the *beak* divided at the bottom into two separate segments, and the whole of the *mouth* richly striped with black lines. This shell is generally found in the American Seas, and at Madeira.

No. 4. STROMBUS LÆVIS. *Shell* white, streaked with pale red; the *mouth* of a rich pink colour; the *beak* bent inwards and outwards; the top of the *spire* separated from the top of the cheek, which has also an elevated summit. This shell is brought from the African Seas, and is drawn from a specimen in the Collection of Mr. Bullock.

REMARKS.

THE genus Strombus, of which we have already given a general account, contains a family of shells remarkable for the curious spikes or claws, which adorn and set off in an ornamental manner the form of the cheek and spire. It is distinguished from almost all other shells by the remarkably strong and vivid colours which are inserted in the internal part of the mouth, and which is, generally, richly striped with black lines. The singular opening at the top and bottom of the cheek, which makes it appear as if cut open, forms one of its most distinguishing characteristics, and divides it from the genus Rostellaria, to which it has perhaps the greatest resemblance. From its general form, and the character of its spines, it has frequently obtained the name of the Spider shell, to which animal it bears a considerable resemblance in its shape; it may also be considered as being almost confined to the warmer regions of the globe, being rarely found in the European seas or coasts.

UNIVALVES.

PLATE XIV.

Genus. SEPTA.

Character. *Shell* spiral; the *spire* and *body* intersected by membranaceous septæ or divisions, placed irregularly and alternately on the body and spire; the first of these forms the *maxilla oris,* the rest are placed upon the body and spire; the *beak* variously bent. The septæ are of a different colour from the rest of the shell.

Species.

No. 1. SEPTA PARKINSONIA. *Shell* olive-coloured, and angulated; the *mouth* white, with a tuberculated edge, inclining to gray. This shell being hitherto undescribed, I have taken the liberty of naming it Parkinsonia, in honour of Mr. James Parkinson, of Hoxton, author of a curious Work upon the natural history of fossils. It is a native of the coast of New Holland.

No. 2. SEPTA SCARLATINA. *Shell* variegated with scarlet, yellow, and white streaks; *spire* round and blunted; the *mouth* narrow and small. A native of Amboyna and the Eastern Seas.

No. 3. SEPTA SPENGLERI. *Shell* brown, sometimes covered with a green epidermis; *spire* tuberculated; *mouth* deeply ridged, and white. A native of New Holland.

No. 4. SEPTA RUBICUNDA. *Shell* red, beautifully streaked with white and brown marks; *spire* tuberculated; the *mouth* denticulated, and having two white teeth on the inner side. This shell resembles the Murex tritonia of Linnæus; but is much smaller. It is a native of New Holland.

No. 5. SEPTA RUBECULA. *Shell* variegated, brown, red, and white; the *mouth* having a rounded channel at the top, like the rest of the Septæ, only more distinctly marked. This shell is a native of the South Seas, and has been mistakenly called a Murex by some authors who have delineated and described it.

No. 6. SEPTA TRIANGULARIS. *Shell* reddish brown, variegated with white and dark brown marks; its singularly angulated form, and particularly its angular cheek, will easily distinguish it from the rest of its congeners. It is a native of the Southern Ocean.

REMARKS.

THE various forms of this curious genus are very striking, and sometimes apparently opposite to each other; nevertheless, if we take the following character as our guide, namely, membranaceous folds, longitudinally placed, one of these forming the cheek of the mouth and the rest of the folds irregularly placed, all the difficulty of classing them will cease at once. At the same time it will be found that these shells have a natural relation to each other in many more respects, such as the folds being painted generally of a different colour from the rest of the shell, the indented notch, and tooth faintly marked at the top of the mouth. This general relationship will fully justify the accurate Conchologist in separating them from the Murex and all other genera hitherto described.

UNIVALVES.

PLATE XV.

Genus. HELIX.

Character. *Shell* slightly spiral; the *body* and *mouth* very much rounded, orbiculated, the outside rim of the mouth ending at the umbilicus, which stands underneath; part of the body naked, and without a columella, projecting into the mouth, having no beak.

Species.

No. 1. HELIX PICTORIA. *Shell* richly striped with brown, blue, and yellow; the *mouth* brown, and circularly formed.

No. 2. HELIX GRISEA. *Shell* gray, striped with purple bands, variegated; one of the folds of the *spire* orange colour; *mouth* white. From a shell in the British Museum. Native place unknown.

No. 3. HELIX CINCTA. *Shell* striped with red and white; *spire* yellow; *mouth* gray, slightly quadrated.

No. 4. HELIX COLUBRINA. *Shell* yellow, streaked red, with a small pattern like a half moon, or the back of a snake; *mouth* brown. A native of the Mediterranean Sea, and rather rare.

No. 5. HELIX SUBVIRIDIS. *Shell* striped with different bands of green; *mouth* purple; the *spire* slightly pointed. From the coast of New Zealand.

Genus. STRIGULA.

Character. *Shell* spiral, tapering in the spire, having no beak; round at the bottom; the *mouth* very narrow and oblong, having a rim all round, with strong and prominent teeth, projecting inwardly and variously.

Species.

No. 1. STRIGULA ORNATA. *Shell* of a pale green, shaded ornamentally with brown streaks; rim of the *mouth* white, the inside of a rich brown. This shell is very rare, and found only in the Southern Ocean.

No. 2. STRIGULA FUSIFORMIS. *Shell* red, richly spotted with black wavy spots, forming a singular and striking pattern; the *mouth* brown, with a white rim. Native place unknown.

No. 3. STRIGULA MACULATA. *Shell* pale mottled red, closely spotted with black marks; *mouth* of dark brown, and the rim white. From a shell in the Collection of the Author.

No. 4. STRIGULA PURPUREA. *Shell* wholly purple, except the mouth and rim, which are of a warm brown colour.

REMARKS.

THE genus Helix will be readily distinguished by the circumstance of the rim running only round a part of the mouth, which distinguishes it from the Pomacea. These shells are generally very thin in their texture; they are found in fresh-water rivers, and on dry land; a considerable variety of them are found even in England. The Strigula is distinguished from the other shells of a similar form by a very narrow twisting mouth, having teeth on each side, and, like the Helix, is very thin in the texture of its substance. From the resemblance which the shells of this genus bear to a mouth armed with teeth, they have sometimes been denominated the Grinning shells; the internal structure must be rather curious, for they are generally flattened from front to back, like the Biplex, before described, and of course considered as deviating from the common form of circular-bodied shells, which chiefly predominate in nature.

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UNIVALVES.

PLATE XVI.

Genus. TEREBRA.

Character. *Shell* spiral, elongated in the *spire;* the *body* short, and resembling the Buccinum; *beak* short, and cut open at the bottom; *columella* twisted, the whole shell banded, and frequently consisting of fifteen or twenty folds in the height of the spire.

Species.

No. 1. TEREBRA CARNEA. *Shell* of a warm flesh colour; the *spire* richly banded with a raised girdle; *mouth* white, the folds veined with white marks. From a shell in Mr. Bullock's Museum.

No. 2. TEREBRA MACULATA. *Shell* of a pale chocolate colour, spotted with black; the *spire* ornamented with a tuberculous band, running the whole way up; *mouth* white. This shell is from the same Collection, and is a native of the Brazils and the West Indies.

No. 3. TEREBRA FUSCA. *Shell* of a strong yellow brown, and closely spotted with square brown marks all over the spire; *mouth* of a dark brown. This shell is sometimes found of a very large size, ten inches in length. A native of the West Indies.

Genus. ACULEA.

Character. *Shell* spiral, elongated in the *spire;* the *body* short; the *mouth* helical, and rounded; no *beak,* the bottom of the cheek being round, and joined to the columella; the *spire* sometimes consisting of twenty or thirty folds.

Species.

No. 1. ACULEA LINEATA. *Shell* white, having a blue line running entirely up the spire, also a brown band between, forming an elegant and delicate character of beauty. From the Island of Ceylon, and very rare. Original in the Author's Museum.

No. 2. ACULEA MAGNIFICA. *Shell* very tall and long, the folds of the spire decussated, and doubly spiral: the form of the whole elegant, yet simple. A native of the islands of the South Seas, and, from its great beauty and rarity, a general favourite with all curious Collectors.

No. 3. ACULEA PALLIDA. *Shell* of a pale purple, decussated; the *mouth* brown, with a white rim running round.

REMARKS.

THE curious forms of the genera Terebra and Aculea have always attracted the notice of the writers upon Conchology, but who have hitherto blended them in the most confused way with the Turbo, Buccinum, &c. We have therefore undertaken to separate them by such distinct natural characters as, we trust, will for ever divide them from all those of an opposite form. The form of the mouth being the grand characteristic, may serve as an unerring guide, in the consideration of these singular and pleasing families of shells, it being always opened at the bottom in the genus Terebra, and closed in the specimens of the Aculea. The variety of the forms of the spire, however, in this numerous and extensive family of spiral shells, is so great, that it almost puzzles the fancy to conceive the astonishing contrasts therein exhibited.

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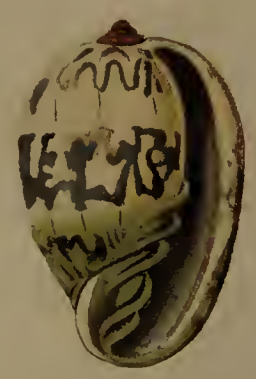

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UNIVALVES.

PLATE XVII.

Genus. VOLUTA.

Character. *Shell* spiral and ovate; the *columella* fluted like a screw; *apex* pointed, and terminating in various forms.

Species.

No. 1. Voluta pattersonia. *Shell* costated with longitudinal ridges, streaked with red bars; *apex* of a beautiful purple; *cheek* doubly edged, and thick. A native of New Holland, and named in honour of Colonel Patterson. From the Author's Museum.

No. 2. Voluta porcellana. *Shell* pale green, shaded with gray, in form oval, the flutes strongly marked upon the columella; *apex* very small and brown. This very elegant shell is a native of the Southern Ocean, and very rare. From the Author's Museum.

No. 3. Voluta undulata. *Shell* flesh-colour, verging to purple, streaked irregularly with twisting lines of red, wavy all over. A native of New Holland.

No. 4. Voluta capitata. *Shell* pale red, with a rounded *apex*, and veins formed like lightning; longitudinal; *cheek* angulated. Found in the Eastern Seas.

No. 5. Voluta pyriformis. *Shell* pale yellow, with purple dotted bands; *apex* rounded with a ball; *teeth* strongly marked. Found in the African Seas.

REMARKS.

The genus Voluta was first established by Linnæus, and has since that time been very properly separated by the French Conchologists into several different genera or families, as the Oliva, Cymbium, &c. In its general form it approaches the nearest to the ancient vases, which it rivals in the symmetry and beauty of the outline; indeed nothing can exceed the simplicity, and at the same time the magnificence of the forms, which the shells of this genus constantly present, and which might be studied by the artist, either in painting or sculpture, with the greatest advantage. The top of the spire is in this species always rounded, in a mammillary form, and the base of the mouth open, and hollow, and by these marks they will be readily distinguished from the Mitra, Bulla, &c. They have not been found as yet in any of the northern tropical regions of the globe; but they present a great variety of species in their native and hitherto almost unexplored southern hemisphere.

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UNIVALVES.

PLATE XVIII.

Genus. VOLUTA.

Character. *Shell* spiral and ovate; the *columella* fluted like a screw; *apex* pointed, and terminating in various forms.

Species.

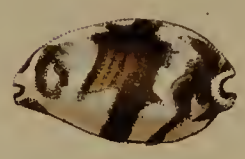
No. 1. VOLUTA MAGNIFICA. *Shell* of a pale brown, richly ornamented with three large transverse bands, of a mottled pattern, resembling the richest jasper or marble; the *mouth* very much expanded, and of a pale yellow, verging to a brown colour; the *columella* having four ridges, in the manner of a cork-screw. This elegant specimen is found only in the southern latitudes of New Holland, and by its graceful shape and splendid colour is admirably calculated to attract the notice and regard of the Conchologist. It is delineated from an excellent shell in the Collection of Mr. Spence in London.

No. 2. VOLUTA AURANTIA. *Shell* of a pale purple, richly striped with scarlet bands, placed irregularly, occupying the whole shell. A native of New Holland and Van Diemen's Land. From a specimen in Mr. Bullock's Museum.

No. 3. VOLUTA MARMOREA. *Shell* of a rich amber colour, striped and marbled with red bands irregularly placed, and veined all over with small diagonal marks. It is said to be a native of New Guinea, and very rare.

REMARKS.

THE genus Voluta has been much admired for the beauty of its individuals, and their lively colours; in some respects they resemble the genus Haustrum, except that the latter has teeth placed upon the cheek of the mouth. The number of plicæ or folds upon the column is generally four, and these are strongly marked, forming the great and striking character of the genus; the apex varying in its shape very considerably. The islands lately discovered in the South Seas have furnished a variety of this curious and interesting family of shells.

2 

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UNIVALVES.

PLATE XIX.

Genus. CYPRÆA.

Character. *Shell* generally oval and orbiculated; *cheek* of the mouth folded inwards; the *mouth* narrow, and wholly covered on each side with teeth; the *apex* generally obscure.

Species.

No. 1. Cypræa obtusa. *Shell* of a dark red colour, softened at the edges by a rich orange colour; *mouth* and *teeth* white; ends of the shell very obtuse; the *apex* invisible. A native of the Eastern Ocean.

No. 2. Cypræa ursellus. *Shell* white, richly streaked with a map pattern of dark brown; ends pointed, bisected.

No. 3 Cypræa asellus. *Shell* white, and striped like the above, with dark brown, the stripes, however, are not waved irregularly in this instance, but are precisely regular in their form and number.

No. 4. Cypræa jenningsia. *Shell* of a beautiful pink colour, spotted with raised spots of a white colour; *mouth* of a pale pink colour, furbelowed and undulated, two dark spots of brown at each end. It is in the Museum of Mr. Jennings, in honour of whose zeal in Conchology, (it being an unique,) I have here named it.

No. 5. Cypræa camelopardalis. *Shell* of a pale purple, verging to a brown tint, and spotted all over like the last shell, with white raised spots; it differs from that, however, in being larger, in having no dark spots at the ends, and in the form of the teeth. It is a native of the Red Sea.

No. 6. Cypræa chalcedonia. *Shell* of a strong red, spotted with marks of the same colour; the edges of the beak slightly crenated, and the segments of the ends very much divided.

No. 7. Cypræa isabella. *Shell* ovate, of a pale flesh-colour, richly streaked with lines and dots of black; the *ends* and *apex* touched slightly with red. A native of the Eastern Seas.

REMARKS.

The Cypræa (or Cowry) is so named from the circumstance of a beautiful shell of this genus having, as it is said, been presented to the temple of Venus at Cyprus; and, indeed, the beauty and splendour of these shells render them worthy of being offered at the shrine of the Goddess of Beauty. The distribution of forms in this class is easily ascertained; the round shape, and narrow mouth, forming the chief and most obvious characteristics, so that, like the Cone and the Strombus, they are easily distinguished from all the other classes.

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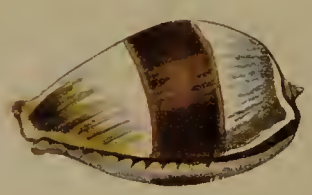

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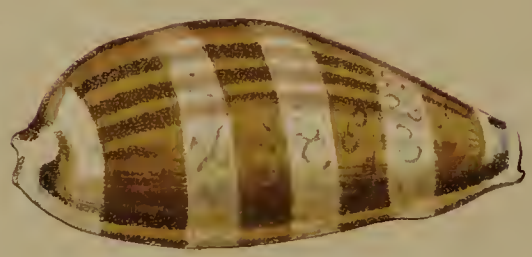

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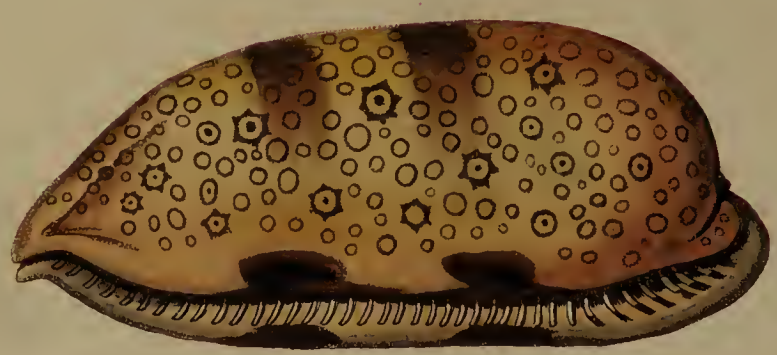

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London, Pub. by W. Miller, 1820.

UNIVALVES.

PLATE XX.

Genus. CYPRÆA.

Character. *Shell* generally oval and orbiculated; *cheek* of the mouth folded inwards; the *mouth* narrow, and wholly covered on each side with teeth; the *apex* generally obscure.

Species.

No. 1. Cypræa testudinosa. *Shell* dark brown, spotted with black, and clouded with red, several minute white spots scattered over the whole; the *body* long and flat; *teeth* pale brown. A native of the West Indies.

No. 2. Cypræa bandata. *Shell* of a pale brown, with a band of dark brown; *spire* very prominent; *teeth* yellow. Native place Antigua.

No. 3. Cypræa contrastriata. *Shell* white, with streaks of an orange colour running transversely over the whole shell; *teeth* white. A native of the East Indies.

No. 4. Cypræa surinamensis. *Shell* white, mottled with a rich pink colour, and partially spotted; *teeth* pale brown. A native of Surinam, and extremely rare.

No. 5. Cypræa maculata. *Shell* of a dark brown, sides and ends white, and thickly spotted with dark spots. A native of the Eastern Seas.

No. 6. Cypræa achatina. *Shell* brown, shaded with red, and streaked with hair lines; ends very obtuse. A native of Otaheite.

No. 7. Cypræa argus. *Shell* of a pale red, ornamented with about one hundred spots, of very different forms, some few being stellated, others round or annulated. Named after Argus, who was fabled by the Poets to have a hundred eyes. A native of the Atlantic Ocean.

REMARKS.

In the family of the Cyprææ, so attractive to the eye of the Connoisseur by the singular expression of their form and colours, we have here given some of the more scarce species. The distinctions are frequently difficult to trace, the difference of species being often only indicated by an opposite marking of the colours; it is observable also that the colours turn gradually darker with age, and that the Cowry can never be considered as fully grown until all the teeth are formed completely on both sides of the mouth.

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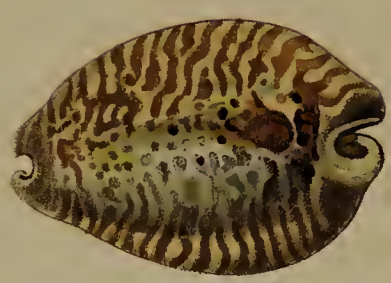

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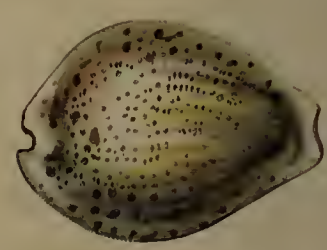

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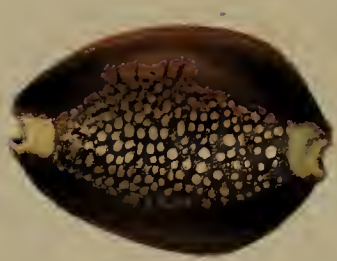

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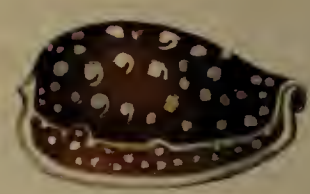

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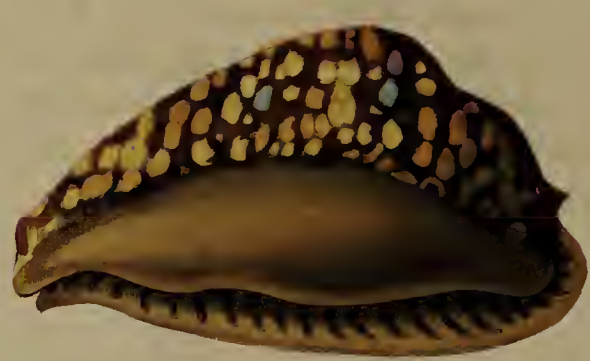

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London, Pub. by W. Miller, 1816.

UNIVALVES.

PLATE XXI.

Genus. CYPRÆA.

Character. *Shell* generally oval and orbiculated; *cheek* of the mouth folded inwards; the *mouth* narrow, and wholly covered on each side with teeth; the *apex* generally obscure.

Species.

No. 1. Cypræa arabica. *Shell* of a pale flesh-colour, adorned with the resemblance of Arabic letters, and spots of pale brown; sides of the mouth spotted with black; *mouth* pale red. A native of the Eastern Ocean.

No. 2. Cypræa autumnalis. *Shell* of a white colour, irregularly streaked with olive coloured veins, and a line of rich brown reaching down the middle of the back; *mouth* deeply notched at each end; *teeth* pale brown. Native place unknown.

No. 3. Cypræa ovata. *Shell* yellow, thickly spotted with brown and gray spots; *teeth* and *mouth* white; form orbicular and tapering.

No. 4. Cypræa caput-serpentis. *Shell* of a dark brown, with a yellow termination, resembling a snake's head, and spotted; *teeth* and *mouth* of a pale brown.

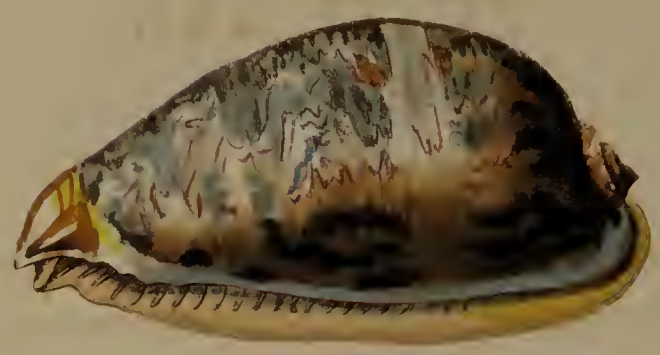
No. 5. Cypræa comma. *Shell* red, covered with white spots, each resembling a comma; the form ovate and acuminated.

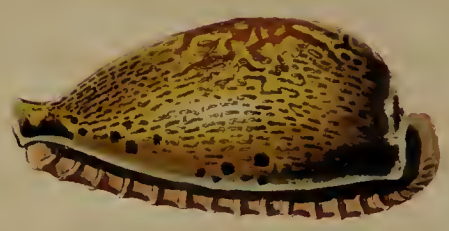
No. 6. Cypræa mauritania. *Shell* nearly black; the summit ornamented with red and orange spots, some of them conjoined; the *mouth* black, and in form pointed.

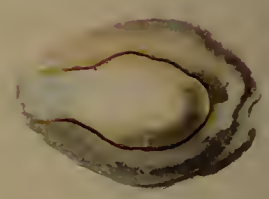
No. 7. The above Shell represented in an earlier stage of its growth, intended to shew the alteration which takes place from age, the apex, in this case, not being yet obliterated.

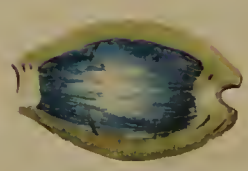
REMARKS.

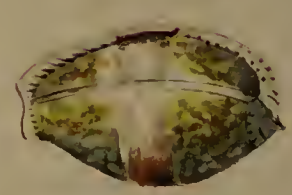
This genus is well adapted for ornamental purposes of the Arts, and has been ingeniously applied to the making of toys and snuff-boxes; but the glossy and shining surface exhibits an effect only to be equalled by the paintings upon china or enamel. They are also free from that epidermis, or scum, which is apt to invest other shells, and which is supposed to be owing to their containing a larger portion of silex.











London, Pub. by W. Miller 1810

UNIVALVES.

PLATE XXII.

Genus. CYPRÆA.

Character. *Shell* generally oval and orbiculated; *cheek* of the mouth folded inwards; the *mouth* narrow, and wholly covered on each side with teeth; the *apex* generally obscure.

Species.

No. 1. Cypræa fuliginosa. *Shell* of a gray colour; the *apex* obvious, elegantly adorned all over with streaks of white, the ends brown, and *teeth* white. A native of the Eastern Seas.

No. 2. Cypræa stellata. *Shell* of a pale orange colour, with gray spots; *teeth* deeply marked and furrowed; *apex* and *beak* turned up at each end, in the middle of each side a dark brown mark resembling a stain; *mouth* spotted with brown. A native of the Cape of Good Hope.

No. 3. Cypræa lynx. *Shell* very round, and marked with elegant spots of various sizes, the ground varying from white to purple and brown; *teeth* of a bright orange colour. A native of Ceylon and Sumatra.

No. 4. Cypræa moneta. *Shell* octagonal, and of a yellow colour. It is found in Guinea, and used on that coast in the place of money.

No. 5. Cypræa elongata. *Shell* of an olive brown, and shaded at the top with dark brown; *mouth* and *teeth* orange-colour. A native of the East Indies.

No. 6. Cypræa annularis. *Shell* of a white, inclining to an opal colour; on the back a circular ring of a bright orange colour; only one of the ends indented. A native of Madras.

No. 7. Cypræa exanthemata. *Shell* of a rich brown colour, marked with white spots, those at each end annular, those in the middle plain and round. A native of the Isthmus of Panama.

No. 8. Cypræa cœrulea. *Shell* of a beautiful blue colour, with a dark cross line of the same in the middle. A native of the Eastern and African Seas. From the Museum of Lord Valentia.

No. 9. Cypræa fasciata. *Shell* small, having only one band placed across the middle.

REMARKS.

The above Cyprææ are natives of the warmer regions of the globe, and of course are seldom met with either near the Arctic or Antarctic Circles. There does not seem at present to be found much variety either in species or colour of those which are found in the Northern Seas, which is one reason, perhaps, why the catalogue of these latter has been little attended to by Naturalists. Those which are found upon the coasts and in the seas of Europe, are also much smaller than the above.

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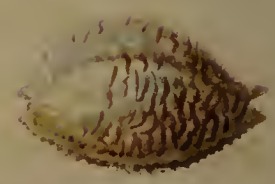

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UNIVALVES.

PLATE XXIII.

Genus. CYPRÆA.

Character. Shell generally oval and orbiculated; *cheek* of the mouth folded inwards; the *mouth* narrow, and wholly covered on each side with teeth; the *apex* generally obscure.

Species.

No. 1. Cypræa alga. *Shell* of a pale flesh-colour, adorned with a pattern resembling Arabic letters; on the back of the shell is the form of an alga, or sea weed; *mouth* flesh-coloured, and spotted irregularly with red spots. This shell, so singular in respect to its marks, is a native of the Cape of Good Hope, and other parts of South Africa.

No. 2. Cypræa valentia. *Shell* with a high and prominent summit, having the ends marked with four ridges of a dark brown colour, and reverted at the corners, forming a most beautiful and singular ornament; the middle yellow, shaded mapwise with red; sides pink, spotted with dark red; *mouth* of a pale brown colour; at the centre of the shell a dark red shadow, in the form of a honeycomb. This elegant shell, which is very rare, and hitherto a non-descript, was obtained from Amboyna by Lord Valentia.

No. 3. Cypræa dama. *Shell* dark brown, with hair marks at the sides, wholly interspersed with round white spots of different sizes; the *mouth* pale brown; the ends of the shell white. A native of Surinam.

No. 4. Cypræa stolida. *Shell* nearly white, inclining to green, beautifully variegated with quadrangular spots of brown on the back and sides; interspersed with small spots of red; *mouth* pale brown. A native of Madagascar, and drawn from a shell in the Museum of Lord Valentia.

No. 5. Cypræa misella. *Shell* ornamented with three bands of dark pink colour, on a light pink ground, the former shaped into angular lines, two dark spots at each end.

No. 6. Cypræa gemmosa. *Shell* of a transparent white, varying to a gray, and in parts to red, longitudinally divided from end to end with a deep furrow. A native of the Eastern Seas.

No. 7. Cypræa cicercula. *Shell* white, without any polish; the ends much acuminated, and the form curious and singular. Native place unknown.

REMARKS.

The genus Cypræa has been supposed by former writers on Conchology, to have the power of enlarging the shell by continuing the mouth farther round, and by means of additional layers. The increase of their bulk, however, is found to be performed in a very different way, being effected by increasing the layers on each side alternately, that is, by adding to the body as well as to the lip, by external layers. The Strombus seems to increase its lip only, by external layers. Nothing can be more surprising than the growth of marine shells, and the manner in which the animal applies the viscous mixture, for the substance, and the coating or enamel, forming a beautiful varnish, and incapable of solution in the watery element in which it is contained. These shells being of a strong texture, are usually found in good preservation.

London, Pub. by W. Miller, 1810.

UNIVALVES.

PLATE XXIV.

Genus. CONUS.

Character. *Shell* spiral; the *body* and spire pointed and cone-shaped: the *spire* short; the *body* having no beak, or rostrum; *mouth* long, and very narrow, straight, and lineal; the sides of the spire sometimes convex and sometimes concave.

Species.

No. 1. Conus cedo nulli. *Shell* of a rich gold colour, elegantly variegated with white ornaments, embossed in various lines and beaded bands of different sizes; the *mouth* white, shaded with brown. This remarkable shell takes its name of Cedo nulli, from the circumstance of its yielding to no other shell in point of beauty and ornament. It is a native of the Indian Seas, and so very rare, that two hundred guineas have been sometimes offered for a fine specimen. Copied from a fine shell in the British Museum.

No. 2. Conus reticulatus. *Shell* of a maroon brown, richly marked with transverse bands of dark brown; the *spire* spotted with brown; the whole surface marked with a netted pattern of small lines; the *mouth* of a pale red colour. Native place unknown.

No. 3. Conus fasciatus, *Shell* white, painted with ferruginous spotted bands; the *spire* of the same pattern; the bands irregular, small and large, interspersed with beads of the same colour. From a beautiful shell in the British Museum.

No. 4. Conus maculatus. *Shell* of a dark purple brown, with triangular spots of pale yellow, inclining to white; *mouth* pale red. This shell is very commonly met with in almost all cabinets; nevertheless, it is very attractive by its striking contrast of colours, and its elegant and taper form.

No. 5. Conus quadratus. *Shell* gray, with square black spots regularly investing the whole shell; *mouth* of a pale red colour. From the coast of Africa.

No. 6. Conus argillaceus. *Shell* white and pale red, richly striped and spotted. A native of the East Indies.

REMARKS.

The genus of shells denominated Conus, from their peculiar form, are chiefly found in the Torrid Zone, and are distinguished by the splendour and richness of their external coverings. Their circular spires, folding inwards, are wholly covered up and enveloped by the external fold of the body, which ends in a straight and open trench at the bottom of the shell. It has a very considerable resemblance to the genus Oliva in its general form and appearance, but differs from it in this circumstance, namely, that the mouth of the Oliva genus is much wider, and has the folds of its spire divided by a thick projecting collar, running round the summit, which the Conus has not. Like the Cypræa, it is one of the families of shells most easy to distinguish, by its very peculiar and striking form, and adds greatly to the splendour of a well assorted cabinet, from the exquisite polish for which its specimens are particularly remarkable.

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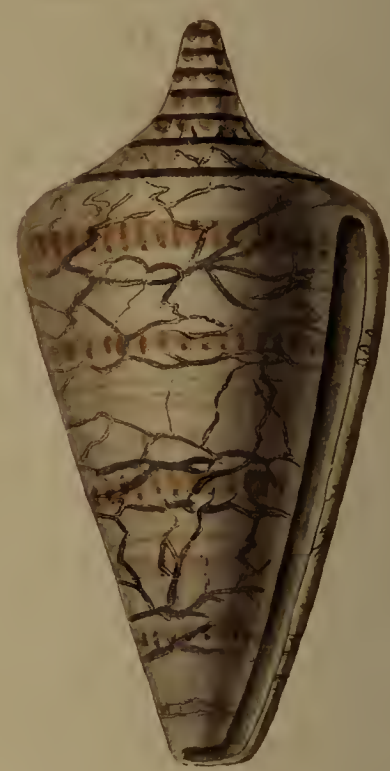

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UNIVALVES.

PLATE XXV.

Genus. CONUS.

Character. *Shell* spiral; the *body* and *spire* pointed and cone-shaped; the *spire* short; the *body* having no beak, or rostrum; *mouth* long, and very narrow, straight, and lineal; the sides of the spire sometimes convex and sometimes concave.

Species.

No. 1. Conus gloria maris. *Shell* spiral, richly veined with green, brown, and olive marks; the *spire* tapering beautifully to a point, with rounded folds; the *mouth* white, and curved at the base. This curious and striking shell has been denominated the *Glory of the Sea,* from its magnificent form and colours, which are sufficient to attract the regard of every admirer of nature. Its graceful outline and contour, and the splendour and contrast of its shades, have given it a remarkable celebrity amongst Collectors. It is found in the South Seas, and is here delineated from a fine specimen in the British Museum.

No. 2. Conus vitifera. *Shell* pale yellow, marked with curious veins like the branching of a vine; the *mouth* brown, and the veins reticulated of the same colour.

No. 3. Conus marmoreus. *Shell* pale lemon colour, richly marbled with veins of purple, having strong bands of red placed alternately across the body; the *mouth* of a pale brown colour. A native of the Asiatic Seas.

No. 4. Conus bandatus. *Shell* white, and banded with red and blue streaks placed transversely and alternately; the *mouth* white.

No. 5. Conus rete aureum. *Shell* yellow, covered with a pattern of gold net, joined to which is a still darker shade, alternately placed, and giving a rich gold appearance to the whole. This shell is found in the African Seas, and has been called the *Gold Brocade.*

No. 6. Conus coralloides. *Shell* pale red, striped and variegated with a rich pattern of coral, represented by neat bands, and diversified with stripes of the same colour and with spots of red; *mouth* of a pale red colour. A native of Sumatra and Ceylon.

REMARKS.

The variety and splendour of the colours which predominate in the Conus genus are such as recommend them eminently to the painter and designer, as from these the most beautiful patterns may be derived. The forms of the spire vary very considerably in the different species, being sometimes flat, or pointed, or elongated; yet the general form of the cone is always strictly preserved. The genus which comes the nearest to this in similitude is the Oliva, which is distinguished from the Cone by a thicker base, and a fluted body and columella, also by the manner of its summit. Nature has in the formation of the Cones admirably varied the simplicity of their shape by the sweet and agreeable interchange of colours, and the banded ornaments which surround them; nor can the most inexperienced eye pass them over without that share of attention and regard to which their curious formation so well entitles them. They are chiefly found in the equatorial regions of the globe, consequently very few species have hitherto been discovered in the English Seas.

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London Pub. by W. Miller, 1816

UNIVALVES.

PLATE XXVI.

Genus. VOLUTELLA.

Character. *Shell* conical, with a depressed and tuberculated spire; the *body* and *maxilla oris* armed with spines or tubercles, and having four flutes on the columella; the beak hardly perceptible.

Species.

No. 1. VOLUTELLA NIGRA. *Shell* black, slightly edged with dark brown; *mouth* white, spotted with brown, with spinous horns bent back, inserted in various parts of the body and spire. A native of the African Seas.

No. 2. VOLUTELLA SULCATA. *Shell* thick, white, streaked transversely with a bright brown colour; tubercles very blunt. Native place unknown.

No. 3. VOLUTELLA DIVERGENS. *Shell* yellow, and beautifully tuberculated; the *mouth* of a bright pink colour on the inner side. It is found upon the coast of Amboyna.

No. 4. VOLUTELLA RUBESCENS. *Shell* reddish, with blunted spines and indentures; the *mouth* white. A native of Guinea.

No. 5. VOLUTELLA LINEATA. *Shell* white, with red lines transversely marked; *mouth* gray or brown. A native of the Eastern Seas.

No. 6. VOLUTELLA NIGRICANS. *Shell* dark brown, and verging to black; the *mouth* being brown and black; the *spines* numerous and pointed. It is found upon Cape Coast in Africa.

REMARKS.

THE genus Volutella differs from all other shells in its peculiar characters and aspects; if it were without the flutings upon the columella, it would much resemble the genus Conus in most respects; at the same time it cannot be placed with the genus Voluta, on account of its spines. For this and other dissimilitudes, I have placed it in a distinct genus, and it may now be said to fill up the space between Conus and Voluta, and from which it will be readily recognized. These shells are all remarkable for their great weight and thickness.

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London, Pub by W. Miller, 1810

UNIVALVES.

PLATE XXVII.

Genus. BUCCINELLA.

Character. *Shell* spiral and rotund; *cheek* projecting; *rostrum* short: *columella* having three flutes; *umbilicus* standing behind the columella; the *mouth* and the *maxilla oris* slightly decussated or fluted; *spire* short and rounded.

Species.

No. 1. Buccinella canulata. *Shell* pale red, with broad stripes of white running round the body, carunculated longitudinally, having three large teeth on the columella, the uppermost most conspicuous.

No. 2. Buccinella rotundata. *Shell* round, and projecting in its form, variegated with transverse stripes of dark brown and white. A native of the South Seas.

No. 3. Buccinella quadrata. *Shell* striped transversely brown and white; *mouth* carinated, of a brown colour; the *spire* rather longer than most of its congeners, and carinated, with the rim of the mouth white and projecting forwards.

No. 4. Buccinella cœrulea. *Shell* of a sky blue colour; the *mouth* of a dark gray, the rim of the mouth very broad and expanded outwards; three very prominent teeth standing upon the columella; edges of the mouth of a pale orange colour. This shell is very rare, and has been described, but not very well figured, by the German Conchologist Martini. The original is in the noble Collection at the British Museum.

No. 5. Buccinella carinata. *Shell* of a pale red, closely striped with a small red pattern; form rounded and projecting. A native of the South Seas, and supposed to be rather scarce; the pattern is in all respects particular, and considerably different from its congeners.

No. 6. Buccinella acuta. *Shell* of an olive colour, pointed in its general form and having a white margin.

No. 7. Buccinella tuberculata. *Shell* closely streaked with brown and gray lines; the *mouth* of a rich orange colour. From a specimen brought from Amboyna, in the Collection of the Author.

REMARKS.

The difference of the columella in the genus Buccinella distinguishes it in a manner from all other shells; perhaps it has a distant resemblance to the Voluta genus; but the latter has four flutes, while the Buccinella has only three. The form of the cheek is also different, being strongly tuberculated inwardly with irregular indentations. The umbilicus also is a remarkable feature in the character of this genus. The species seem not to be very numerous, if we may be allowed to judge by the rarity of them at present. They differ from the genus Volutella in not having the conical form, which is peculiar to that genus. It appears that several of the fossil shells recently discovered in France as well as in England, are truly reconcileable to this genus, which we here present to the Conchologist, for the first time, and as highly worthy of his attention.

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UNIVALVES.

PLATE XXVIII.

Genus. SCALARIA.

Character. *Shell* spiral, pyramidal, having no beak, pointed, covered with circular ribs, detached, projecting, placed spirally, ascending to the top, the ribs being different in colour from the rest of the shell; *mouth* round and labiated, with a circular and reflected edge of the same colour as the ribs.

Species.

No. 1. SCALARIA MAROCCANA. *Shell* blue, marked longitudinally with white ribs, and streaked transversely with brown marks; *mouth* brown, and opening at the top into a small channel. This curious specimen is found on the coast of Barbary.

No. 2. SCALARIA BRUNELLA. *Shell* of a rich brown, variegated with white ribs; the *mouth* invested with a projecting denticle upon the side of the columella. Found on the Coast of Coromandel.

No. 3. SCALARIA CLATHRUS. *Shell* pale ferruginous brown, slightly streaked with purple; *mouth* round and smooth. A native of the British coasts.

No. 4. 5. SCALARIA DISJUNCTA, or ROYAL VENTLETRAP. *Shell* of a pale purple, richly ornamented with white ribs, and having all the folds of the spire detached and separate from each other, forming thereby a singular phænomenon, and an exception to all other known shells. It is chiefly found in the Eastern Seas.

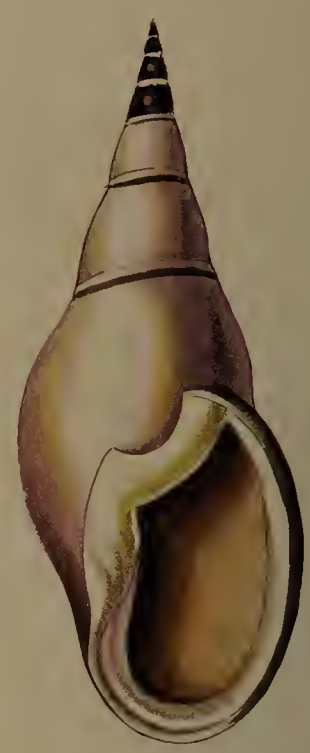
No. 6. SCALARIA VARIEGATA. *Shell* red and yellow, the folds of the spire varying in colour, the first being red, the others yellow. Found on the coasts of the Mediterranean Sea.

No. 7. SCALARIA PALLAS. *Shell* blue and white, and first discovered in the Baltic Sea by Professor Pallas; the ribs are more close and numerous than in the other species, and give altogether a pleasing appearance to the intricacy of its form.

No. 8. SCALARIA GREENLANDICA. *Shell* of a pale brown invested with thong-shaped ribs; the four upper folds of the spire smooth; the *mouth* round. A native of Greenland.

REMARKS.

THE genus Scalaria takes its name from the fancied resemblance which it has to a ladder. It has a distant similitude to the genus Turbo of Linnæus, but is of a much more compound and intricate structure, for which reason I have adopted the opinions of the modern French Naturalists in placing it as a distinct genus. These shells are very rare, and have sometimes been sold by auction at £50. each, though now much more common than formerly, owing, perhaps, to the great care taken of those which have been procured at various times. As a pattern of the curious workmanship and variety of Nature they exhibit a most elegant model of grace and lightness.



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UNIVALVES.

PLATE XXIX.

Genus. MELANIA.

Character. *Shell* spiral, without any rostrum or beak; *cheek* projecting and rounded; *mouth* contorted, and surrounded with a broad rim; *umbilicus* none; the *columella* slightly twisted, and joined to the cheek by a circular border.

Species.

No. 1. MELANIA AURANTIA. *Shell* orange coloured, striped with elegant longitudinal red veins; the rim of the *mouth* broad and variegated with blue and red. This beautiful specimen is found only in New Zealand. From a delineation of a specimen in Mr. Jennings's Museum.

No. 2. MELANIA ACUTA. *Shell* white, streaked with pale yellow; the *mouth* of a pale brown; the top of the spire very taper in form, and colour of a dark brown; the rim of the mouth very much indented. A native of the South Seas. This shell has also been figured by Born.

No. 3. MELANIA CARNATIS. *Shell* of a beautiful pink colour in the mouth, with the folds of the spires various, yellow, blue, and purple; the rim of the mouth broad and wrinkled doubly upon the body and side. A native of the East Indies, and having a very splendid and shewy contrast in its colours.

No. 4. MELANIA NONPAREIL. *Shell* white, slightly streaked longitudinally with brown; *spire* pointed, and most curiously adorned with blue and brown streaks, having the appearance of a rich porcelain vase; the *mouth* carunculated and angular at the top, and inferior extremity, with a broad boundary line running all round on the inner part, following the form of the shell. This singular shell is said to be a native of China, and is extremely rare. From a shell in Mr. Lloyd's Museum.

No. 5. MELANIA STRIATA. *Shell* striped, of a sallow colour; the *mouth* orange coloured, and narrow at the top; the rim broad and white, of an irregular form. It is a native of New California. From one in the possession of Mr. Hyde.

REMARKS.

THE characters of this curious genus are so distinctly marked, that by a bare inspection they will be readily noted and distinctly remembered. These shells have sometimes been erroneously classed in the genus Bulla, but from this and all other shells, their broad rim or margin running round the mouth sufficiently distinguishes them; there is also a faint approach to something like a tooth, on the body side, and inner part of the mouth. This genus vies with all others known, by its gaudy and capricious display of fascinating colours. The spire is generally rounded at the top, and the substance of the shell membranaceous and transparent. It may be observed also of this family of shells, that it has an imperfect and distant resemblance to the genus Bulimus, described in the following Plate, but exhibits certain precise distinctions. It forms a pleasing and agreeable addition to our various discoveries in the southern regions of the globe.

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London, Pub. by W. Miller 1810

UNIVALVES.

PLATE XXX.

Genus. BULIMUS.

Character. *Shell* spiral, ovate or oblong; *columella* smooth and not labiated, but joined to the bottom of the cheek by a rounded base; *beak* not perceptible.

Species.

No. 1. Bulimus carinatus. *Shell* irregularly striped longitudinally with dark brown and pink colours; *mouth* carinated, of a varying green colour, prismatic, richly coloured; the *columella* armed with a salient angle. This curious shell has been lately brought from New Holland.

No. 2. Bulimus eximius. *Shell* pale brown, striped with white; the *mouth* green, prismatic, richly coloured; the whole displaying a chaste and elegant effect, and a pleasing contrast. A native of Van Diemen's Land, and drawn from a specimen in the Museum of Mr. Murrow.

No. 3. Bulimus zebra. *Shell* of a dark brown, with irregular longitudinal streaks, resembling the Zebra; the *mouth* wide, and curved on the columella. A native of the Friendly Isles and New Zealand. Drawn from a specimen in the British Museum.

No. 4. Bulimus phasianus. *Shell* of a lively red, veined with white, and richly shadowed, like the breast of the pheasant; *mouth* wide and expanded. This is one of the most beautiful shells recently discovered in New Holland, and is found on the banks of the largest rivers in that country. It is now very commonly known, nevertheless, it is held in much esteem by Collectors, from the elegance of its form and colours.

No. 5. Bulimus lineatus. *Shell* white, inclining to yellow; *mouth* white; *columella* of a pink colour. A native of the East Indies and the Cape of Good Hope. From a shell in the Museum of Mr. Bullock.

REMARKS.

The genus Bulimus has been established by M. Bruguière, an eminent French Conchologist, who has shewn the propriety of separating it from the genus Bulla, with which it had been erroneously placed by former writers. Its characters are indeed very peculiar and striking, for it is quite destitute of a beak or channel, and instead of that, the bottom of the mouth is of a rounded form. It has a considerable resemblance to the genus Melania, but differs from it in not having a thickened margin or rim surrounding the edge of the mouth. Like the Trochus, the shells of this genus are frequently distinguished by a beautiful prismatic changeable colour in the opening of the mouth, an effect which it is very difficult to express tolerably in painting. They are chiefly found in the Southern Ocean, and may be considered as forming a beautiful assemblage or family allied distantly to the Buccinum, so familiarly known in the European seas. There is also a smaller species of the Bulimus phasianus, the pattern or marks of which are exactly similar to the one here represented, though its shell is rather thicker; it may therefore be denominated the Bulimus phasianus minimus of the before mentioned genus.

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UNIVALVES.

PLATE XXXI.

Genus. ANCILLA.

Character. Shell spiral and acuminate; the *mouth* ovate, and ending at the bottom in an open slant; the *columella* having a thickened girdle, which surrounds it on the back of the shell, and is slightly or deeply umbilicate in the different species.

Species.

No. 1. Ancilla alba. *Shell* white, and crenated upon each fold of its spire, with slight longitudinal ridges. From Dr. Lettsom's Museum.

No. 2. Ancilla fasciata. *Shell* of a warm brown colour, interlined on each fold of the spire with a yellow line ascending; the girdle white and umbilicate.

No. 3. Ancilla pallida. *Shell* painted externally with a rich pattern of pale red, resembling a map; the girdle thick and projecting; *spire* short and subturreted. A native of the coasts of New Holland, where it is found in great abundance.

No. 4. Ancilla fulgens. *Shell* of a bright yellow colour, shaded with pink; the girdle very much twisted and umbilicate; the *spire* sinuated, and swelling out, forming in the whole a beautiful and splendid appearance. A native of the South Seas. From a specimen in the Author's Museum: fine specimens are rather rare.

No. 5. Ancilla maculata. *Shell* spotted with a rich coffee colour, resembling in some degree No. 3 in its general form, only more acuminate and rounded in the folds of its spire. Native place not exactly known.

No. 6. Ancilla cœrulea. *Shell* of a singular blue colour, striated in its body and spire, and slightly umbilicate.

No. 7. Ancilla lineata. *Shell* of a pale red, richly striped across the whole body and spire with red lines; the *maxilla oris* richly denticulated at the bottom.

REMARKS.

The genus Ancilla has some distant resemblance to the Oliva genus, except that the folds of its spire are not separated by a channel; it differs from the Buccinum chiefly by the thickened collar upon its base. Several species of this shell have been lately discovered in a fossil or petrified state, in places remote from the sea, but none of them exactly resembling such as are recent, or at present existing in the sea. They add to the wonderful proofs of analogy which exist through all the parts of nature, and confirm most strongly the idea of the former extension of the ocean, either universally or partially, over the surface of the globe.

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UNIVALVES.

PLATE XXXII.

Genus. PLEUROTOMA.

Character. *Shell* spiral, spindle-shaped, acuminate; the *spire* and *beak* long; the *cheek* of the mouth projecting, and hollowed out with a circular opening or trench, as if cut out with a knife.

Species.

No. 1. Pleurotoma contorta. *Shell* brown, streaked with twisted lines of red; the *spire* strongly tuberculated, acuminate, and doubly ridged; the opening in the cheek large and obvious; the *beak* much twisted; the *spire* elegantly tapering. Native place not at present ascertained. From a shell in the Collection of Mr. Bullock.

No. 2. Pleurotoma lineata. *Shell* pale red, streaked across with red veins; the *spire* rotund and slightly canulated; *beak* long and open. From a shell in the Author's Museum, supposed to have been brought from the southern latitudes.

No. 3. Pleurotoma zebra. *Shell* white, richly streaked across with interrupted dark stripes, from whence its name; the general form of the body and spire very angular, and the whole character curious and strongly marked. From a shell in the British Museum.

No. 4. Pleurotoma albida. *Shell* white, and beautiful, formed into angular ridges to the top of the spire, and slightly shaded with red; there is an exquisite delicacy in the shape of the whole shell, which is nevertheless very thick and strong. From a specimen in the Author's Museum, and, like all its other congeners, from the South Seas, being frequently found at New Zealand and Lord Howe's Island.

No. 5. Pleurotoma babylonica. *Shell* spiral, turreted; the *spire* divided into different stages or heights, giving a faint idea of the tower of Babel, from which circumstance it takes its name. It is a common shell, and had formerly been improperly placed by Linnæus under the genus Murex.

REMARKS.

The genus Pleurotoma is distinguished from all other shells by the slit or opening in the side of the mouth, also for its general resemblance to a spindle, by which latter name these shells have sometimes been called. They are not numerous in the recent state, and are found only in the southern regions of the globe: nevertheless, immense quantities and varieties of them have been discovered in a fossil state in various parts of Europe. The genus Pleurotoma has a faint and distant resemblance to the Rostellaria and Cerithium genera, before described, but differs in the situation of the opening, which is the maxilla oris or cheek, and which is an invariable mark of the family. The amazing variety of the forms of Nature is in no division more strongly evidenced than in the above shells.

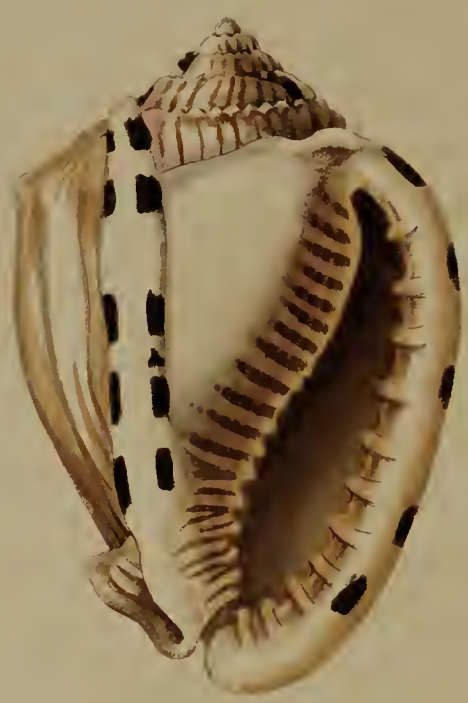

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PLATE XXXIII.

Genus. CASSIS.

Character. *Shell* ventricose; *spire* short and pointed; the *mouth* narrow, sinuated, and denticulated on both sides; the *body* and *spire* invested with angular sutures, irregularly placed, alternate; the *lip* thick, and strongly rounded.

Species.

No. 1. Cassis rotundata. The *shell* brown; the suture white, and placed in front, spotted with black squares; back rounded, and ornamented with small tubercles; the same sutures repeated in the spire, which is angular and acuminated. It is found upon the coasts of America and the West Indies. Delineated from a shell belonging to Mr. Stutchbury.

No. 2. Cassis alba. *Shell* white, highly polished, transversely spotted with dark brown marks; *spire* doubly reticulated in its folds, having also a continuation of the sutures; *columella* inclining to red; the *beak* short, and bent backwards. Native place unknown.

No. 3. Cassis variegata. *Shell* of a yellow brown colour, ornamented with red longitudinal striæ, placed in a waving form upon the body and spire, generally acuminate; the *mouth* shaded with a yellow brown. Found in the Eastern Seas.

No. 4. Cassis labiata. *Shell* of a deep red, transversely striated with tuberculous ridges and stripes; the *mouth* large, of a rich orange colour, beautifully striped with red, with a very thick lip, spreading over and covering the shell; the teeth small and numerous, investing both sides of the mouth. This shell is frequently found at the Cape of Good Hope and in the African Seas.

REMARKS.

The genus Cassis is so called from its resemblance, when viewed sideways, to the form of a helmet, and is strongly distinguished from the genus Buccinum, by the narrow and straight mouth, doubly denticulated, and the lips being so thickened as almost to form half the substance of the shell. The whole shell has a sort of triangular appearance, whichever way it is placed. The angular lines carried up to the top of the apex distinguish it sufficiently from the genus Cassidea, and also from the genus Conus, which has always a straight and plain mouth. It bears a considerable resemblance indeed to the Strombus genus, with which it has been obviously confused by some Writers, owing to some slight analogy of form and character. Upon the whole, it may be regarded as a very ornamental shell, well calculated to set off, by the strength of contrast and the boldness of its lines, others more graceful and delicate in their structure. It is only found in the seas of the Torrid Zone.

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UNIVALVES.

PLATE XXXIV.

Genus. CASSIDEA.

Character. *Shell* spiral, variously tuberculated, and sometimes spinous; the *mouth* and *cheek* swelling out; the *spire* short; the *columella* fluted; the *cheek* irregularly notched within; the rostrum short and deflexed; no folds placed upon the spire, which distinguishes it from the genus Cassis.

Species.

No. 1. CASSIDEA LABIATA. *Shell* ovate, pointed tapering, of a reddish brown colour; the *columella* yellow; *mouth* brown. Found in the South Seas. From the Collection of Mr. Rosse.

No. 2. CASSIDEA BANDATA. *Shell* white and gray, having three bands in the front of the body of a red colour; the *spire* slightly tuberculous; the *cheek* denticulated, and spotted with red; the *mouth* of a lively brown colour. The form of this specimen is graceful and neat. It is a native of the East Indies. From a shell in the Collection of Mr. George Spence.

No. 3. CASSIDEA CORNUTA. *Shell* brown, and armed with horns, projecting; *mouth* pearl-coloured; *body* striped with yellow bands, and brown crossing lines; the *cheek* armed with two horns. From a specimen in the Collection of the Author. It has been figured by Regenfus, in his large Work of Conchology.

Genus. NERITES.

Character. *Shell* globular, the opening of the mouth semicircular, or shaped like a half-moon; no spire; the *beak* small, and faintly marked; the *columella* standing directly across the middle of the shell, making a sort of stage or platform, and generally fluted.

Species.

No. 1. NERITES AURANTIA. *Shell* of a discoidal shape; the *body* olive colour, banded with pointed red spots running circularly round; *mouth* orange colour. Native place unknown.

No. 2. NERITES RUBICUNDA. *Shell* of a pink colour, richly shaded with pointed lines of dark red; *mouth* of an orange red; the lip or border white. A native of the Eastern Seas.

REMARKS.

THE genus Cassidea has a very considerable resemblance to the genus Cassis, before described, but differs in not having any raised folds placed alternately upon the spire.

The genus Nerites differs from the Helix by being rounder, and having a semilunar mouth; its spire, or at least the resemblance of it, sometimes appears marked upon the upper end of the shell, as if it were sunk into the substance. The form and appearance in all the Nerites are very much alike, and not very interesting in respect to beauty, we have therefore only represented two species in the present description of the genus.

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UNIVALVES.

PLATE XXXV.

Genus. CERITHIUM.

Character. *Shell* turreted; the opening oblique, and ending at the base in a channel cut short by a sudden recurvature; *lip* ending at the top in a distant channel; *mouth* labiated all round; *spire* long, and irregularly bulbous.

Species.

No. 1. CERITHIUM DESPECTUM. *Shell* of a pale brown, the folds of the spire caruncular, unequally and irregularly; *mouth* white, inclining to purple; the general form of the spire bulbous and pyramidal. A lately discovered shell, from the South Seas. Delineated from one in the Author's Museum.

No. 2. CERITHIUM CURVIROSTRA. *Shell* white, streaked crosswise with brown shades; *spire* very tuberculous; *mouth* of a rugged form, and divaricated; the *cheek* ending in a pointed beak, crossing over the front of the mouth, from whence its name. Native place the Eastern Seas and Persian Gulf.

No. 3. CERITHIUM CARINATUM. *Shell* of a rich brown colour, deeply ridged with oblique and transverse furrows; *mouth* of a very dark brown; the *spire* irregularly bulbous and tuberculous. It is found frequently in the islands of the southern hemisphere. From the Museum of Dr. Lettsom.

No. 4. CERITHIUM RETICULATUM. *Shell* purple and brown, streaked with brown; *mouth* of an open form, and expanding sideways. A native of New California. From the Author's Museum.

REMARKS.

THE genus Cerithium differs in its character so distinctly and accurately from all other shells, that it is surprising how the earlier writers upon Conchology could ever have confused it with the Terebra or Aculea. In the length of the spire, indeed, there is a considerable resemblance at the first sight; but in the Cerithium it is more irregular, square-shaped, and invested with knobs or protuberances of unequal size. The cheek of the mouth also has generally a great projection beyond the body, and stands in a slanting manner, as if placed on one side; the rostrum or beak is short and recurved.

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PLATE XXXVI.

Genus. CERITHIUM.

Character. Shell turreted; the opening oblique, and ending at the base in a channel cut short by a sudden recurvature; *lip* ending at the top in a distinct channel; *mouth* labiated all round; *spire* long, and irregularly bulbous.

Species.

No. 1. CERITHIUM FERRUGINOSUM. *Shell* tapering and pointed; the *mouth* open, patulous; the *cheek* very much expanded; the whole colour of the shell of a rusty brown, except the lip, which is nearly white. This shell is very rare, and is found in the East Indies only.

No. 2. CERITHIUM SPICATUM. *Shell* of a bright reddish brown, ornamented with rounded spikes, or tubercles placed in rows upon the spire; the *mouth* yellow within, the lips white. It is thought to be a native of the Cape of Good Hope. From a shell in Dr. Lettsom's Museum.

No. 3. CERITHIUM FUSCUM. *Shell* brown, variegated with shades of blue; *mouth* blue; the folds of the spire undulated with waving lines. This shell is larger than most others of this genus, and is brought from the West Indies and Madeira.

No. 4. CERITHIUM BANDATUM. *Shell* gray, inclining to white; the *spire* ornamented with bands of a red colour, running round the folds; the *mouth* brown, edged with white; the *spire* smooth, and without tubercles. Native place unknown.

No. 5. CERITHIUM TURRIFORMIS. *Shell* of a buff colour, irregularly shaded with dark brown streaks; the *mouth* brown, and the lips white. This shell is remarkable for the soft and pleasing effect of its colouring, and is generally brought from the East Indies, where, it is said, they are found only on the deepest and most rocky shores.

REMARKS.

THE Cerithium has a strong analogy to the Rostellaria in the spire and channel belonging to the top of the mouth, but differs from it in the beak and maxilla oris, which are not decussated in this genus. It differs obviously from the Turbo and Terebra genera in the form of its mouth and beak, and, what is very singular, is not met with in the European Seas. Fossil shells of this genus, deposited, as it is supposed, in former ages by the Deluge or some other great convulsion of nature, are found in immense quantities, and variety of species, in the inland mountains of France, Germany, and England; but, after a careful examination of their forms, they are found to be totally different in their shape, and must be considered as distinct individuals. What makes the circumstance the more extraordinary is, that the number of species of this genus, amongst the recent ones, are very few, whereas the variety and quantity of the fossil species are immense. But it would be taking the Reader too far from the present subject to enter in this place into farther reflections upon these phænomena, which may perhaps more properly form the subject of a future and distinct work.

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PLATE XXXVII.

Genus. TEREBELLUM.

Character. *Shell* spiral, widening towards the base; the *apex* acute; the opening of the mouth longitudinal, narrowed at the upper end, the base emarginated without teeth; the *columella* truncated; no beak.

Species.

No. 1. TEREBELLUM LINEATUM. *Shell* of a pale yellow colour; the *mouth* of a dark brown, oblique lines of red running in a slanting direction across the body, two and two, the lowest end of the mouth appearing as if cut off suddenly.

No. 2. TEREBELLUM SPIRALE. *Shell* of an olive yellow; the *mouth* of a dark blue; the *spire* marked regularly with oval brown spots, and lines of brown investing the body and cheek transversely. This shell, as well as the former, is supposed to be rare. It is brought from the Eastern Ocean.

Genus. CYMBIUM.

Character. *Shell,* the spire involved or covered over with the body of the shell, leaving only a small rounded top or apex; the *mouth* longitudinal, arcuated, cut open at the bottom by a wide channel, dividing it from the columella, which is fluted, with undulated and painted divisions.

Species.

No. 3. CYMBIUM SPINOSUM. *Shell* of a bright amber colour; the *spire* almost concealed, and surrounded with spines; the *mouth* spreading out, of a pale pink colour. This elegant shell, so captivating by its form and colours, is a native of Ceylon and Madagascar.

No. 4. CYMBIUM BANDATUM. *Shell* of a lively amber colour, richly banded with transverse red shades; the *mouth* being of a pale red; the spines of the apex short and rounded. This species is rather uncommon, and is brought from the South Seas.

No. 5. CYMBIUM PURPUREUM. *Shell* purple, spotted with brown spots, placed in bands transversely; the *mouth* white; the *apex* small, and enclosed.

REMARKS.

THERE exists in the genus Terebellum and Cymbium a distant resemblance in the form and character of several parts. The open channel and want of beak form a characteristic mark of the Terebellum. The spire partly hid and covered up by the foldings of the cheek in the Cymbium, distinguishes it clearly from the Voluta and other shells, with which it has hitherto been too much confounded; the bands are also very distinguishable on the base, being of a different colour from the rest of the shell, particularly the first, which is generally purple. There is also much difference in the form of the apex, or summit of the spire, being in some species spinous, in others quite involved by the folds of the cheek, and nothing left but the small round tubercle at the top, and that barely visible. It takes its name from its general resemblance to a flask, or drinking cup.

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UNIVALVES.

PLATE XXXVIII.

Genus. POMACEA.

Character. *Shell* orbicular, with a small spire of three folds; *mouth* open and wide; *umbilicus* placed beneath the rim of the mouth; the edge of the mouth continued all round, and projecting from the body.

Species.

No. 1. Pomacea annularis. *Shell* white, with a brown mouth; the *body* environed with three stripes of dark brown, richly striped with black; the rim of the mouth white. A native of the Mediterranean Sea.

No. 2. Pomacea linearis. *Shell* pale reddish brown, slightly spotted with pale pink spots; *mouth* slightly shaded with a broad band of brown reaching round the body; the rim yellow. This shell is found on the coasts of North America, and is drawn from a specimen in the Collection of Mr. Stuart.

No. 3. Pomacea maculata. *Shell* large, and olive-coloured; the *mouth* of a rich brown, streaked and spotted in an elegant manner with dark brown spots; *spire* rather acuminate. It is a native of the West Indies. From a shell in the valuable and extensive Museum of Mr. Bullock.

No 4. Pomacea variegata. *Shell* red, richly striped in upright and transverse veins of the same colour, the general appearance rather pale; the *mouth* white, inclining to brown, the general form very much rounded; the *spire* depressed. Native place unknown.

No. 5. Pomacea orbata. *Shell* olive-coloured; *mouth* of a dark purple, edged with a yellow tint. From a shell in the Collection of Mr. Stutchbury, and supposed to be a native of the West Indies.

REMARKS.

The genus Pomacea is here, for the first time, separated from the genus Helix, from the obvious difference of the rim, or edge inclosing the mouth, which is continued all round. The Pomacea is one of those shells which are always umbilicate, by a strongly marked hollow ridge or furrow placed on the under part of the body. The difference which distinguishes it from the Turbo is also sufficiently striking, the mouth of the latter being quite circular, and having not so short a spire as the present subject.

In the Helix genus the rim or edge always stops short upon the body side of the mouth, at the commencement of the umbilicus, as will be perceived by examining the characters of that genus.

The variety of colours exhibited in the shells of the genus Pomacea atones in some degree for the want of beauty in their forms; they are frequently covered with an epidermis, which may be removed with considerable advantage by a weak solution of muriatic acid, by that means disclosing the native colours of the species.

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PLATE XXXIX.

Genus. MITRA.

Character. *Shell* tapering, the summit of the spire sharply pointed, base of the cheek denticulated; the *columella* plicated like a screw, the lowest growing gradually smaller; the *mouth* open at the base; *beak* none.

Species.

No. 1. MITRA PAPALIS. *Shell* of a pale brown, richly shaded with lines and spots of dark red; the *body* and *spire* elongated, the revolutions of the spire numerous, and adorned with a crowned border; the *mouth* yellow, verging to a brown. This shell is generally found in the East Indies, and is more rare than any other of the genus.

No. 2. 3. MITRA ABBATIS, or ABBOT'S MITRE, so called from its being smaller than the above. These are given as varieties of the same shell, to shew the different manner in which Nature sometimes sports in the outward markings or colours, keeping, at the same time, to a general similarity of form.

No. 4. MITRA EPISCOPALIS. *Shell* white, slightly inclining to a brown orange, spotted and streaked with a rich vermillion colour; the *spire* and *body* gradually tapering and acuminate; the *mouth* generally of an orange or yellow colour. Found in the Atlantic Ocean, and the Cape de Verd Islands, where it is plentifully scattered upon the shores.

REMARKS.

THE genus Mitra is of so peculiar a form as to be readily distinguished from the Voluta, Oliva, Cymbium, &c.; its taper spire and crowned top separate it from almost every genus except the Terebra, from which it chiefly differs in having a longer body, and more protuberant and spread out. Lamarck has very properly founded a distinction upon the circumstance of the flutes or teeth of the columella growing smaller as they descend towards the base. There is a certain character of magnificence and grandeur in some of the shells of this family, which makes them very interesting to the painter, but the lustre and transparency of the colours are so great, that it is very difficult, or rather impossible, to imitate them exactly. The Genus Mitra has been erroneously placed by some Writers with the Buccinum kind, from which, however, it ought to be carefully distinguished, and we should rather think that it has much more analogy to the genus Buccinella, not only in having a pillar invested with flutes, but also by the form of the maxilla oris, or cheek.

BULLA. PL.

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HARPA.

London Pub. by W. Miller 181

UNIVALVES.

PLATE XL.

Genus. BULLA.

Character. *Shell* spiral, spire not appearing, but folded up in a hollow centre, at the top of the body; *beak* none; *mouth* wide, and spread out; the general form oval, or rounded; *columella* plain.

Species.

No. 1. Bulla cinctoria. *Shell* oval, of an olive-green colour, banded with transverse shades of brown and white, three in number on the body, and one at the top; inside of the *mouth* purple, with bands of gray and white.

No. 2. Bulla ferruginosa. *Shell* of a pale pink colour, the inside of a white and rust colour; the *body* ornamented with party-coloured bands of white and brown; the *spire* wholly obliterated, as is usual in this genus. Native place unknown.

Genus. HARPA.

Character. *Shell* spiral, ovate or swelling out, having compressed longitudinal ribs, sharpened with an angle or point; aperture below emarginated; no canal; the *columella* smooth; the base acute.

Species.

No. 1. Harpa grandiformis. *Shell* richly mottled with brown, pink, and white streaks, placed in irregular waves; the *maxilla oris* spotted red; the *mouth* large and patulous. Found in almost all the islands of the West Indies.

No. 2. Harpa delicata. *Shell* very slender, and elegantly marked with red streaks; the *beak* undulated with strongly marked ridges; the *mouth* of a pale brown.

No. 3. Harpa urniformis. *Shell* of a pale purple, with transverse bands of red; the top of the *spire* blue; the general form much resembling an ancient sepulchral urn.

REMARKS.

The two genera above described have some resemblance to each other in their general character, except that the Bulla is without any external spire, and also wants the opening at the bottom of the shell. The Harpa is of an elegant and graceful form, and is distinguished chiefly by the ribs which adorn the whole external part of the shell; the spire is very short, and crowned at the top with a small circular knob or capitulum, something in the manner of the genus Pyrula. The maxilla oris, or cheek, is also divided from the body by a curious haunch or slanting opening crowned with a knob, which gives the whole shell a striking character peculiar to itself.

The Bulla is not uncommon upon the English and French shores, but the Harpa is found only in the Southern and Pacific Seas, and may be regarded as one of the most laboured of Nature's works, as it presents to the eye many little circumstances of high finishing and painting, which an artist can by no means easily imitate, or convey to the mind by any laboured description whatever. The Harpa was erroneously placed by former Authors with the genus Buccinum, into which error Linnæus also fell, from some mistake respecting its general form.

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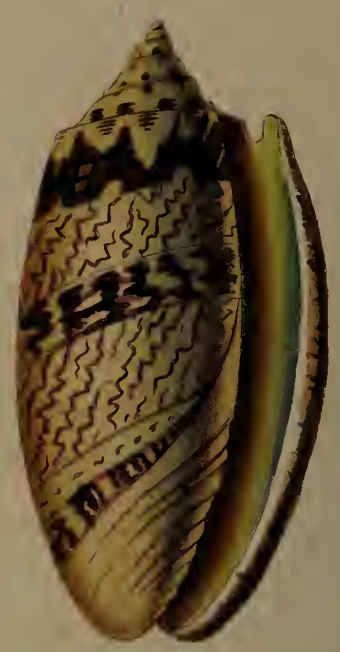

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London Pub. by W. Miller. 1810

UNIVALVES.

PLATE XLI.

Genus. OLIVA.

Character. Shell spiral, of an oval form; the *spire* short; the *body* and *cheek* rounded and protuberant; *beak* none; the *mouth* open at the base; the *columella* slightly fluted, with a strong and broad ridge or girdle encircling the bottom of the shell; *cheek* indented at the top, and having a girdle or ridge inserted between each fold of the spire.

Species.

No. 1. Oliva fusca. *Shell* brown, richly striped; the *mouth* white and spreading out. A native of the West Indies, and sometimes varying to a paler colour, or even white.

No. 2. Oliva porphyracea. *Shell* dark purple and white, having three belts or circles enveloping the body; the *spire* also variegated with dark purple spots; the *mouth* red. From a shell in the Museum of Mr. Latham.

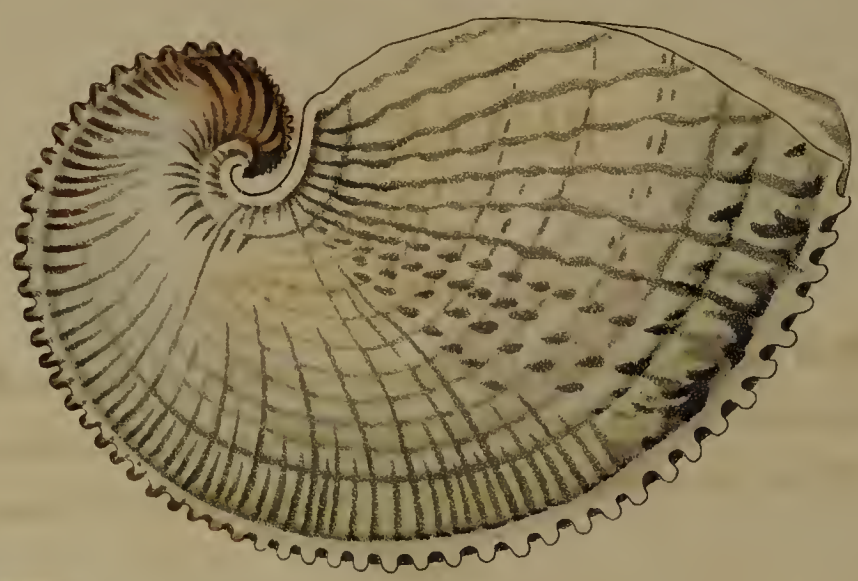
No. 3. Oliva leveriana. *Shell* of a pale purple and gray, richly studded and adorned with a close net pattern, inclosing the whole body; the *columella* covered with small branched flutings of a white colour, the general colour of the pattern a reddish pink, formed into angular marks. From a shell formerly in the Museum of the late Sir Ashton Lever, in honour of whose zeal for the promotion of natural history and the sciences, I have taken this opportunity of naming it.

No. 4. Oliva zigzag. *Shell* pale yellow, thickly interspersed with brownish lines in an irregular and waving pattern, from whence its name; the *mouth* and girdle at the base of a strong orange colour. A native of Ceylon.

No. 5. Oliva subviridis. *Shell* of an olive green, interspersed with curious marks of dark brown, placed in the form of belts; the *mouth* gray, the girdle at the base of a rich brown colour. From a shell in the collection of Mr. Jennings of Chelsea, and supposed to be a native of the southern hemisphere.

REMARKS.

The genus Oliva has a distant resemblance to the Voluta and Conus, with which it has been much confused and mixed in the different species, both by Linnæus and other subsequent Writers. Nevertheless, its distinctions are sufficiently striking and obvious to mark its peculiar and undeviating character. The cheek is divided from the spire by a narrow channel, which is filled up in part, by a girdle running round the base, it has also a thickened collar or appendage, which is generally of a different colour and character to the rest of the shell; to these may be added its narrow mouth, bending outwardly in a circular and protuberant form. The species of this genus or family are remarkable for the pleasing and lively lustre of their colours, and their agreeable contrasts, while the polish is at the same time almost equal to that of the Cowries. It is very probable that the fish places the girdle upon the folds of the spire after its growth is fully completed, and at the same time finishes the inside of its mouth by coating it with a beautiful enamel. In the young shell these circumstances are never perceptible, as in the Strombus and others, and they serve to mark the maturity or immaturity of their age.



London. Pub. by W. Miller. 1810

UNIVALVES.

PLATE XLII.

Genus. ARGONAUTA.

Character. *Shell* semiorbicular, flattened centrally, convolved, shaped like the Cornu Ammonis, environed at the outer edge with a membranaceous ligament, narrower than the rest of the shell, and doubly tuberculated; the inner edge rounded.

Species.

No. 1. ARGONAUTA VITREA. *Shell* white, transparent, elongated, divided transversely by lineal divisions; the outer edge membranaceous and articulated. This curious shell was formerly noticed by the celebrated M. Lyanet of Amsterdam, who first described it. Mr. Jennings of Chelsea has a specimen of it: there is also another in the British Museum, from which this was delineated; it is esteemed to be very rare, and to be a native of some of the southern latitudes. Nature seems to have sported in a wanton mood when forming it, so differently from its congeners: in its general shape it may be compared without impropriety to a Cornucopia. This shell has been erroneously placed by Humphreys amongst the Patellæ genus, to which it has no relationship or resemblance, as the Patellæ are always without the ligament.

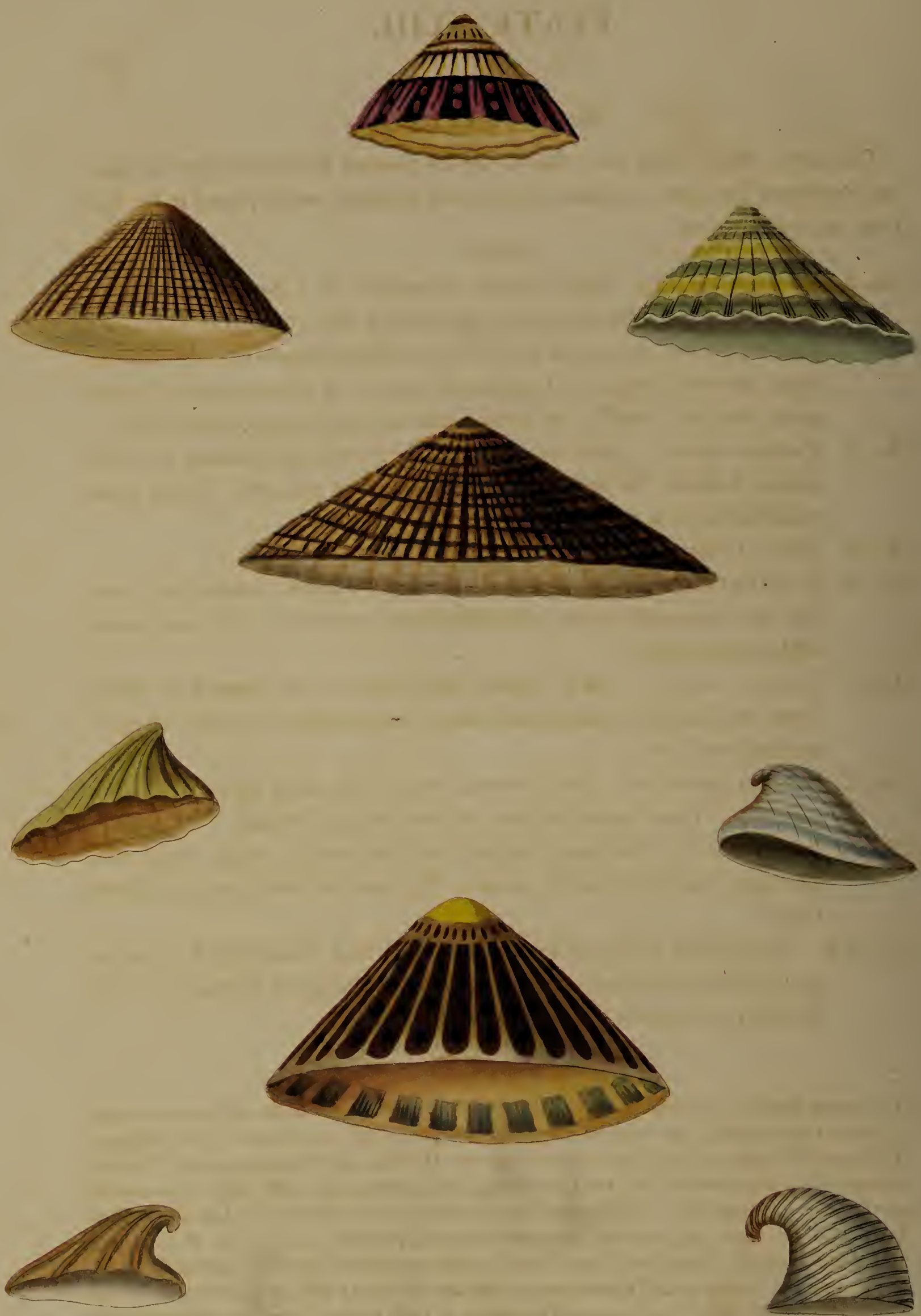
No. 2. ARGONAUTA ROTUNDA. *Shell* white, deorbated, transparent, slightly coloured with brown in the centre; the outer edge tuberculous. A native of the Cape of Good Hope.

No. 3. ARGONAUTA STRIATA. *Shell* white, rounded, channelled. A native of the East Indies. From a specimen in the Author's Museum.

No. 4. ARGONAUTA GRANDIFORMIS. *Shell* large, white, very much flattened, painted brown in the centre, outer ridge tuberculous. A native of the Cape of Good Hope. Delineated from a shell in the Museum of Mr. Bullock. The mouth appears as if broken off, which is a *deceptio visus.*

REMARKS.

THE genus Argonauta possesses little beauty in its colours, but a symmetry exists in its form, which is highly pleasing to the eye. It strongly resembles the well-known fossil shells called by the name of Cornu Ammonis, and it is not improbable that it is of the very same genus and character. It is distinguished from the Nautilus, or chambered shell, by being simple in its opening, and having no internal chambers or divisions. Its singular form sets it apart and distinct from all other known species, and its apex or nucleus is always centrally regular in its involution. The Argonaut can raise itself in the water, and by expanding a small sail and eight little oars, skim agreeably along the surface of the main in fine weather, but upon any alarm of danger it dives immediately to the bottom.



London Pub.d by W. Mater 1818

UNIVALVES.

PLATE XLIII.

Genus. PATELLA.

Character. *Shell* shaped like a shield, the top pointed, having no spire, the summit sometimes open, and sometimes curved and nodding; *mouth* placed at the bottom, and widely open.

Species.

No. 1. Patella radiata. *Shell* pointed, acuminate, of a flesh colour streaked with dark red, in the form of rays proceeding from the centre, inside of a pale red colour; the general design of the ornamental parts is lively in the extreme, the rays being joined together and spotted. It is a native of the English coasts, but only found in the deepest and most rocky parts of the beach.

No. 2. Patella rustica. *Shell* red, striated closely with protuberant rays, the summit rounded, the inside white, inclining to a pale red. Found in the neighbouring seas and coasts of Gibraltar and of Spain.

No. 3. Patella cœrulea.

No. 4. Patella oblonga. *Shell* brown, within and without, radiated with central rays, unequally sided, and rather oval in its form; the outer surface slightly decussated.

No. 5. Patella adunca. *Shell* yellow, with fissures, the summit nodding; *mouth* red, faintly streaked with brown transversely, the sides unequal, and hollowed out.

No. 6. Patella cypridium. *Shell* streaked transversely with gray; *mouth* of a pale blue. Found upon the coasts of Scotland and Ireland.

No. 7. Patella picta. *Shell* brown without, and blue within, richly striped with dark rays, reaching from the centre. This shell is found upon the African Coast.

No. 8. 9. Two Patellæ of the nodding or incurvated kind, resembling No. 5 in the peculiar form of the top, and, in a small degree, the genus Argonauta, except that they are without the rim.

REMARKS.

The genus Patella is perhaps the most simple in its form of all the shells at present known; it has no twisted spire, and in its exterior shape it is pyramidal and triangular, like the genus Trochus; its inside is plain and smooth, like the Dentalia and Serpula genera; it has no chamber or division within, like the Proscenula, which always has a flat stage or projection on the inner and under side; it differs also from the fossil genus described by Lamarck, called the Calyptræa, which has a circular stage placed centrally within. Some of the Patellæ have a beautiful satin-like appearance, and a lustre equal or superior to the finest porcelain; these kinds are much valued by the Connoisseurs, and are extremely difficult to represent by any mode of painting; their excellence must be seen to be fully known; they are chiefly found in the South Seas, and the warmer regions of the globe. It is curious to consider by what contrivance of Nature the animal attaches the shell to its body, as one would suppose it would be constantly coming off, by any accident or motion; but perhaps it may be detained by the power of suction, or by a membrane which can only be detached by the death of the tenant of the small habitation.

London, Pub. by W. Miller, 1810

UNIVALVES.

PLATE XLIV.

Genus. HAUSTRUM.

Character. *Shell* spiral; the *mouth* oval, large, and patulous, resembling a scoop; *columella* trenched out, or cut away, by the great width of the opening, and inwardly depressed; no visible beak or rostrum, but in the place thereof, a small lacuna or channel; the *spire* short, or hardly perceptible.

Species.

No. 1. HAUSTRUM STRIATUM. *Shell* of an orange and brown colour, striped transversely; *spire* short and angular; the *cheek* slightly notched with teeth. It is found in the Eastern Seas. From Dr. Lettsom's Museum.

No. 2. HAUSTRUM PICTUM. *Shell* pale red, and striped transversely; *mouth* open, patulous, painted delicately with streaks of red; in the lacuna of the cheek is placed a narrow black denticule, projecting, and forming a curious ornament in the appearance of the shell. This curious shell has been lately brought from the East Indies, and is delineated from the original in the Museum of Mr. Harrison of Westminster.

No. 3. HAUSTRUM DENTEX. *Shell* of a very dark brown; *mouth* of a pale red, beautifully shaded with various tints of purple and blue; in the lacuna of the columella a small denticule projecting; the *cheek* armed with numerous large teeth decussated, and the body armed with small spines, closely placed. This beautiful shell, remarkable for the singularity of its form and colour, is said to be a native of Nootka Sound, which, however, is rather doubtful; it is so exceedingly rare that only two specimens have yet been seen in London, one in the possession of Mr. Harrison, the other of Mr. Humphreys.

No. 4. HAUSTRUM TUBERCULATUM. *Shell* purple and brown, variegated; *mouth* gray; *columella* reddish and brown. A native of the South Seas.

No. 5. HAUSTRUM ZEALANDICUM. *Shell* dark brown, richly striped and reticulated; *mouth* gray; *columella* white. A native of New Zealand. From the Museum of Dr. Lettsom, and very rare.

REMARKS.

THE genus Haustrum abounds in shells of a curious character and description, the leading distinction being the great size of the mouth in proportion to the rest of the shell; added to which, they may be said to have no beak, the body ending in a slight opening at the base. They have been very much confused by former Writers on account of their differing so much in form amongst themselves, some placing them with Murex, others with Buccinum. I have therefore appropriated to them a distinct character, for the first time, which completely separates them from all other shells at present known or described.

London Pub. by W. Muder 1810.

UNIVALVES.

PLATE XLV.

Genus. ARANEA.

Character. *Shell* spiral; the *mouth* rounded; the *spire* short; the *beak* very long; the whole shell covered with irregular pointed spines; no calcar or spur upon the rostrum; number of the membranaceous divisions uncertain and irregular.

Species.

No. 1. ARANEA DENUDATA. *Shell* brown, with divisions painted in a variegated pattern; *mouth* round, labiated, membranaceous, and projecting; *spines* few, and thinly scattered up the body and beak. Found plentifully upon the African coasts and seas.

No. 2. ARANEA TRIBULUS. *Shell* brown, inclining to purple; *body* tuberculated, and beset with thick and strong spines, of these latter there are three rows, one upon the back, and one on each side. It is found in various parts of the Western Continent.

No. 3. ARANEA TRIREMIS. *Shell* slender, beautifully tapering, and much resembling the triremis, or three-oared galley of the Ancients; the *spines* are elegantly sinuated, and tapering towards the extremities, forming at once a delightful object, by the symmetry and union of its parts, and exhibiting the most delicate taste in its form. It is found at Sumatra and other parts of the East Indies.

No. 4. ARANEA TENTACULA. *Shell* pale brown, tuberculous; the *spines* upon the body short, those upon the back longer, and bent upwards like hooks; *mouth* round, and of a pale brown colour; the *spire* short and tuberculated. This curious shell, which was hitherto undescribed, is from the Museum of Mr. Latham. Native place unknown.

REMARKS.

THE genus Araiea, so named from its resemblance to the spider, has characters so distinct from the Murex, Buccinum, and Strombus, as to be easily distinguished at first sight. Amongst these may be reckoned the spines, which are placed irregularly all over the shell, and spring from the membranaceous divisions, which vary in number in the different species; the mouth also is closely marginated by a projecting ridge, which almost shuts it out from the beak, the latter being much longer in this than in any other shell. The spines may perhaps serve as a guard or defence to the animal, to preserve it from danger, and also to facilitate its rotatory motion at the bottom of the sea. The beauty and variety of this genus have always strongly recommended it to the notice of Collectors, who think themselves very fortunate in obtaining perfect specimens of it.

London, Pub. by W. Miller 1811.

UNIVALVES.

PLATE XLVI.

Genus. ARANEA.

Character. *Shell* spiral; the *mouth* rounded; the *spire* short; the *beak* very long; the whole shell covered with irregular pointed spines; no calcar or spur upon the rostrum; number of the membranaceous divisions uncertain and irregular.

Species.

No. 1. ARANEA FASCIATA. *Shell* of a lively brown colour, striped crosswise with bands of rich brown; the *mouth* of a bright red colour; the *spines* variegated with brown. From a shell in the British Museum.

No. 2. ARANEA ACULEATA. *Shell* pale brown, striped with bands of an ochreous brown; *spines* very sharp, and acutely prominent; the *mouth* striped on the inside. A native of the African Seas.

No. 3. ARANEA CONSPICUA. *Shell* of a pale red; the *mouth* yellow, and richly foliated by a broad spreading margin; the *spines* few, and strongly marked; *mouth* of a pale red colour. This striking shell was delineated from a specimen in the Museum of Mr. Bullock, and is supposed to be very rare; it is probably a native of the Eastern Ocean, and is altogether of a very remarkable form and character.

No. 4. ARANEA CINEREA. *Shell* gray; the *beak* invested with three spines; the *mouth* of a dark red, inclining to brown. Native place unknown.

No. 5. ARANEA PALLIDA. *Shell* of a pale blue; the *mouth* very much narrowed and contorted, and differing materially from most of its congeners in its general shape and contour. This shell is said to be found upon the African Coast.

REMARKS.

No genus of shells has been more confused in the arrangement of the early Writers upon Conchology than the genus Aranea, and yet none can have a character more distinctly marked. It has been erroneously placed by Lister, Dargenville, and even Linnæus, with the genus Murex, to which it has not the smallest analogy, its spinous or thorny character being quite sufficient to distinguish it from that and all others. In the preceding plate we endeavoured to demonstrate the necessity of placing the two shells called the Tribulus major and the Tribulus minor, in the genus Aranea, by which means, and by the present Plate, we trust, all the difficulties of arrangement will be avoided, and the whole class brought to a determinate character. The Aranea has a distant resemblance to the Triplex, from which, however, it differs in the form of the beak, and in the height of its spire, as will be seen by a reference to each description.

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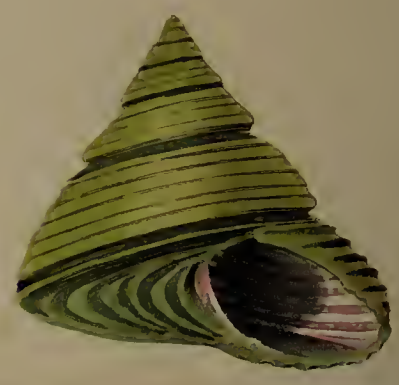

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London, Pub. by W. Miller, 1816

UNIVALVES.

PLATE XLVII.

Genus. TROCHUS.

Character. *Shell* conical, spiral, the aperture depressed crosswise, and slightly quadrangular, the perpendicular axis inclined to the base.

Species.

No. 1. Trochus acuminatus. *Shell* of a dark purple, spotted with tessellæ in the form of tiling; *mouth* prismatic, green, and red, form ventricose, and tapering gradually to the summit. A native of New Zealand.

No. 2. Trochus decarinatus. *Shell* green, streaked across with sharp furrows, between each fold of the spire a very deep furrow; the *mouth* prismatic, red, and blue. This elegant shell is also a native of New Zealand. From Dr. Lettsom's Museum.

No. 3. Trochus altus. *Shell* red, variegated with white; *mouth* yellow, verging to brown; the folds punctuated, and slightly carinated. This shell, which is very rare, was discovered at Botany Bay.

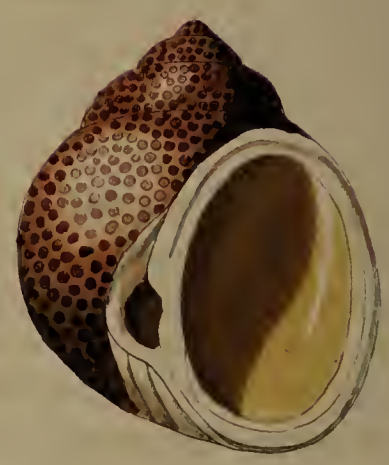
No. 4. Trochus bicolor. *Shell* white, streaked with green and brown; *mouth* brown. A native of New Holland. From a specimen in Dr. Lettsom's Museum.

No. 5. Trochus apiaria. *Shell* woven of white and green in the manner of a bee-hive, which it much resembles in form; *mouth* brown. A native of Van Diemen's Land, and differing from No. 4 materially in the number of the folds of the spire.

No. 6. Trochus melissus. *Shell* of a pale honey colour, with ribs at each joint of the spire transversely placed, and slightly spotted; *mouth* brown. A native of Madeira.

REMARKS.

The genus Trochus forms a curious family, consisting of shells of a triangular form, which, when placed upon a flat base, have their spire constantly leaning to one side; they resemble in a great measure the Patellæ, except that they have an internal staircase, or helical spinal process, which the Patellæ are without. These shells are natives of almost every country and coast, and present an infinite number of individuals, highly interesting for the pearly appearance and prismatic colours of the mouth, which seems as if very narrow, and is almost hid, by being placed, as it were, at the bottom of the shell; it differs from the Turbo genus in being more square; the Turbo has also an orbicular mouth, and the folds of its spire are more distinct, and projecting in their form. The largest specimens are found chiefly near the Torrid Zone. The discoveries in the South Seas have added considerably to the different varieties hitherto known.



NATICA.

London Pub. by W. Miller

UNIVALVES.

PLATE XLVIII.

Genus. BUCCINUM.

Character. *Shell* spiral, ovate, or elongate; the *cheek* standing straight forwards, the opening oblong; the *beak* covered at the back with a thick twisted tubercle, swelling outwards; no canal; the *columella* plain, full, and of a convex appearance.

Species.

No. 1. Buccinum reticulatum. *Shell* of a pale red, having irregular undulated dissepiments; the *mouth* brown; the *cheek* labiated, round, and projecting. It has a considerable resemblance to the common whelk, and is found in the islands of Guernsey and Jersey.

No. 2. Buccinum turritum. *Shell* of a pale yellow; the *mouth* purple; the *spire* elegantly ornamented with tubercles, and narrow longitudinal ribs, and rather taller than generally occur in the Buccinum. A native of the East Indies, and supposed to be a rare shell.

Genus. NATICA.

Character. *Shell* spiral, subglobose, umbilicate, aperture whole, orbicular; *columella* transverse, without teeth, very much thickened, and a swelling partly guarding or covering the umbilicus.

Species.

No. 1. Natica quadrata. *Shell* of a bright maroon colour, divided into irregular squares, of a dark red; the *mouth* much labiated and white, streaked with red inwardly. A native of the Cape of Good Hope. From the Museum of Mr. Hayter.

No. 2. Natica circularis. *Shell* pale brown, striped with a dark red; *mouth* inclining to purple, the edge of the mouth white, the umbilicus distinctly marked. Native place unknown. From the Museum of the Author.

No. 3. Natica maculata. *Shell* richly spotted with circular red marks, giving a lively and delicate appearance to the white ground underneath; the *mouth* white, inclining to brown. This curious shell is from the South Seas, and is in the possession of Mr. Chandler.

REMARKS.

The Buccinum, as described by Linnæus, contained a number of shells of various forms, as the Cassis, Terebra, Harpa, &c. which latter have been very properly divided by the French Authors into several separate and distinct genera. The Natica is also now distinguished from the Helix, by its very striking and permanent character, as well as from the Pomacea, from which it entirely differs. The variety of colours, and the sportive forms which many of these shells present, are in some degree a compensation for the want of those graceful proportions which are so obvious in some of the larger shells. The Buccinum is, of all others, the most numerous upon the European coasts, under which may be classed the common Whelk, which yields a food highly esteemed by some tastes; the smaller varieties of this genus are almost infinite, and may very properly be submitted to the examination of the microscopic philosopher.

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London. Pub. by W. Miller. 1810.

UNIVALVES.

PLATE XLIX.

Genus. TURBO.

Character. Shell spiral; the *mouth* whole, and rounded, flattened at the base; no *beak; spire* subturreted; the *umbilicus* small, and sometimes nearly imperceptible; *columella* plain; *cheek* and *body* sometimes armed with spines or tubercles.

Species.

No. 1. Turbo subflavus. *Shell* of a bright green, shaded with brown; the *spire* tuberculous, and pointed; the *mouth* circular, and spreading out, of a bright gold colour. This specimen was brought from the East Indies, and is in the Collection of Lady Wilson.

No. 2. Turbo brachiatus. *Shell* of an olive colour, with a pale gray mouth; the *cheek* and *mouth* armed with spines, channelled out, and projecting; *spire* short and depressed; *mouth* projecting, and expanded at the base. Native place unknown.

No. 3. Turbo perforatus. *Shell* of an olive brown colour, streaked across with yellow and red veins; the *body* broad and flattened, the *umbilicus* strongly marked, and perforated at the top, through the spire, forming a sort of staircase within. Found in the seas of New Holland. From the Museum of Mr. Spence.

No. 4. Turbo aurantia. *Shell* of an orange red, richly adorned with dark bands, running transversely across; the *mouth* yellow; the *spire* rounded and smooth, without tubercles. From Mr. Bullock's Museum.

No. 5. Turbo pallidus. *Shell* of a pale red, strongly and closely tuberculated; *mouth* white and round; the *spire* short and pointed. From a shell in the Collection of Lady Wilson.

REMARKS.

The genus Turbo is distinguished from the Trochus family, already described, by its circular mouth, and the rounded form of its whole body; the foldings of the spire are also more detached from each other; the variety is very considerable in the various species, as sometimes the umbilicus is very faintly marked, and in others very apparent, and in some few instances even extending through the shell up to the top. The mouth of the Turbo is in general adorned with mother of pearl, or nacre, and forms an elegant contrast with the exterior colours of the shell; it is very common in the European seas, but not in general reaching to any great size. If we were to describe the character of the genus Turbo from its general and most striking external formation, we should call it a rounded shell, composed of two circles, the one forming the mouth, the other the body and spire, the latter placed obliquely over the other, and not perpendicularly. The want of the beak or rostrum will be always sufficient to distinguish it from the Murex and Buccinum, added to which, we have the authority of Linnæus for its name and adoption in the general system of Conchology.

London. Pub. by Wm Miller 1820

UNIVALVES.

PLATE L.

Genus. PYRULA.

Character. *Shell* pear-shaped, the base canal-shaped, and ending in a slanting form; *columella* smooth, when seen in front; *spire* smooth, undulated, and ending at the top in a round knob.

Species.

No. 1. PYRULA TULIPA. *Shell* of a pale flesh-colour, shaded with brown; the form of the body and spire elegantly sinuated, exhibiting a most graceful outline, and ending at the top of the spire in a small capitulum or knob; the *beak* and *cheek* widely open, and spreading; the colour of the marbled veins which invest the whole shell, in an undulated form, varies in depth of tone in different individuals, being sometimes very dark, in other cases of a very pale brown. It is generally found upon the coast of Africa and Madagascar, and is by no means rare, although remarkable for the singularity of its form and character. The present specimen is in Mr. Spence's Museum, and is remarkable for the small tubercles which are ranged upon the edge of the cheek.

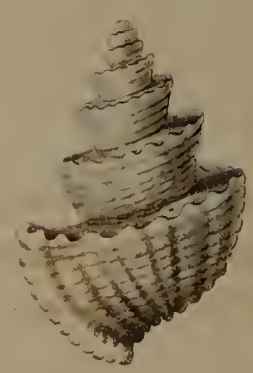
No. 2. PYRULA CŒRULEA. *Shell* pale blue, marked uprightly and across with gray marks; the *mouth* and *columella* white. This shell is supposed to be rare, and is from the Indian Seas.

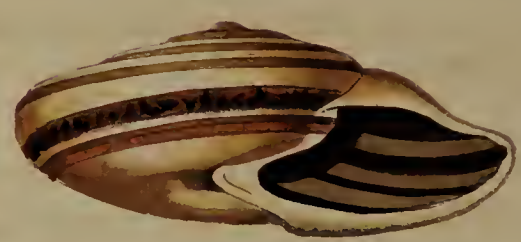
No. 3. PYRULA INDENTA. *Shell* of a pale fawn colour; the *mouth* brown; the *spire* and part of the body curiously ridged with a pattern of upright channels rounded, and ending in a knob or capitulum. Native place unknown. From the Author's Museum.

No 4. PYRULA HUNTERIA. *Shell* of a blue and purple colour, richly marbled and striped with white and black, forming in the whole a rich and lively appearance; the *mouth* blue. This shell has been lately imported from New Holland, and being hitherto without a name, I have denominated it Hunteria, in honour of the Governor of that colony, whose exertions in the prosecution and encouragement of its natural history have been so particularly eminent.

REMARKS.

THE Pyrula genus of shells is highly interesting to the Naturalist, from the great number of fossil shells which have been discovered analogous to it, in the mountains of different parts of Europe; no instance, however, has yet occurred of the forms of these exactly resembling the living ones, and therefore it is supposed they have either been brought from other seas at present unknown, or else are now become extinct. This genus, it is also to be remarked, has a general similarity and affinity to the Murex tribe, but differs from them in not being tuberculous in its body and spire. The honour of having properly distinguished it is to be attributed to the French Naturalists Bruguière and Lamarck, to whose distinctions the Author confesses himself very highly indebted in several parts of this Work.





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UNIVALVES.

PLATE LI.

Genus. TRIGONA.

Character. *Shell* spiral, the folds of the spire triangularly formed and tuberculous; the *mouth* triangular, having immediately behind it a large *umbilicus,* which reaches internally to the top of the shell, forming a complete opening.

Species.

No. 1. and 2. Trigona pellucida. *Shell* white, inclining to a pale brown, tuberculous; the *mouth* triangular, of a different form from the mouths of all other shells at present known, and also from the Trochus family, which are generally square-shaped in the mouth. This most singular and unique shell is from the South Seas, and in the possession of Miss Mitford, to whose Museum it forms a striking appendage.

Genus. PLANORBIS.

Character. *Shell* circular, flattened; opening of the *mouth* depressed, marginated, and partly spread out, or patulous. The Planorbis resembles by its general form the Ionic volute in architecture.

No. 3. Planorbis divaricatus. *Shell* of a pale amber colour, richly mottled with red veins and clouds; *mouth* expanded, all the folds of the shell compressed together, and hollow on the under side. From a specimen in the British Museum.

No. 4. Planorbis dilatus. *Shell* white, with variegated bands of red and brown; *mouth* expanded, arcuated. From a specimen in the Collection of Miss Mitford.

No. 5. Planorbis collapsus. *Shell* olive-coloured, having bands of blue and red; the *mouth* garnished with a green band, the whole shell very flat.

Genus. COLUMNA.

Character. *Shell* spiral, elongated in the spire, the top rounded and blunt in its form; *mouth* very narrow, and pointed at the top; no beak, but the base rounded, and joined to the cheek; the folds swelling and irregular in their size and forms.

No. 1. Columna grisea. *Shell* gray, streaked with brown; *mouth* pointed. A native of Barbadoes and Jamaica. From a specimen in Mr. Radstock's Museum.

No. 2. Columna marmorea. *Shell* of an amber colour; the *mouth* gray.

REMARKS.

The singular genus Trigona, is now delineated for the first time, and in respect to its mouth, forms a curious exception to all other shells at present known.

The Planorbis is delineated in two different ways, to illustrate its form more clearly, No. 3 shewing it in a direct manner from the top, and No. 4 shewing the mouth-view.

The two shells of the Columna genus, given above, are of that kind which are called by Naturalists, heterostophus, that is to say, the folds are twisted in an opposite direction to most other shells, forming thereby a curious exception in Nature, which seems to be a constant occurrence in this genus.

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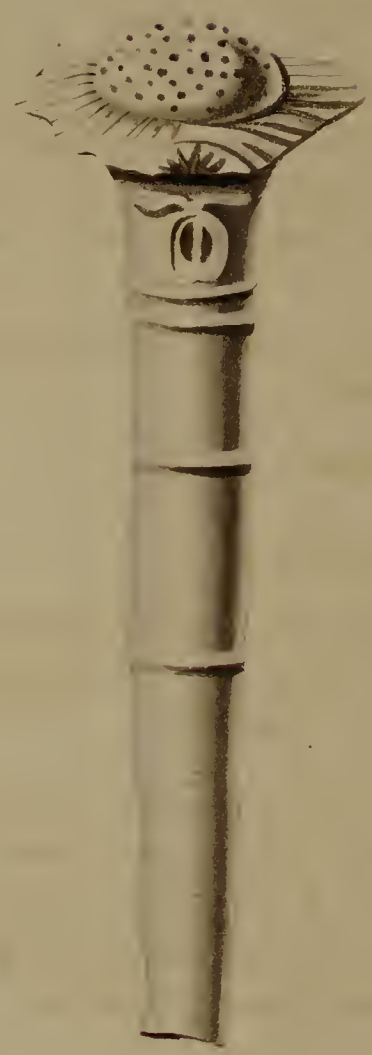

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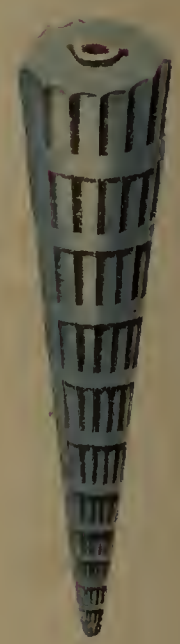

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ORTHOCERAS. DENTALIA.

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UNIVALVES.

PLATE LII.

Genus. HALIOTIS.

Character. *Shell* oval, ear-shaped, having on the back a row of spiracles, or breathing holes, placed lengthwise; the *mouth* pearly, and sinuated.

Species.

No. 1. HALIOTIS ROTUNDATA. *Shell* brown, having a volute internally folded; the *mouth* pearly, green, red, and blue; the spiracles circularly placed.

No. 2. HALIOTIS SINUATA. *Shell* brown, slightly streaked with red, very much resembling the above, but more elongated in its form.

Genus. AQUARIA, OR WATERING-POT.

Character. *Shell* spout-shaped, having at one end spiracles, or breathing-holes, capable of pouring forth and receiving water; the *body* rounded in the form of a pipe, and elongated; the colour pale gray or brown.

No. 3. AQUARIA RADIATA. *Shell* gray, ornamented at the top by singular radii, or spikes, projecting from a central knob; the pillar banded irregularly. This singular shell is a native of the South Seas, and has been much admired for the strange peculiarity of its shape, from which circumstance it has derived its name.

No. 4. AQUARIA IMBRICATA. *Shell* pale brown, tuberculous, having spiracles, but not any radii. Native place unknown.

Genus. ORTHOCERAS.

Character. *Shell* turreted, elongated, having divisions or cells communicating internally with each other, the outside of the shell invested with longitudinal ribs of the length of the shell, in the manner of the genus Scalaria.

No. 1. ORTHOCERAS SCALARIA. *Shell* brown, with white ribs, very pointed at the lower end, and having a small spout at the upper part, opening externally. This singular shell has chambers within. Found in the Baltic Sea.

No. 2. ORTHOCERAS DECUSSATA. *Shell* gray, having an ornamental fluting divided by transverse bands or ligaments. Native place unknown.

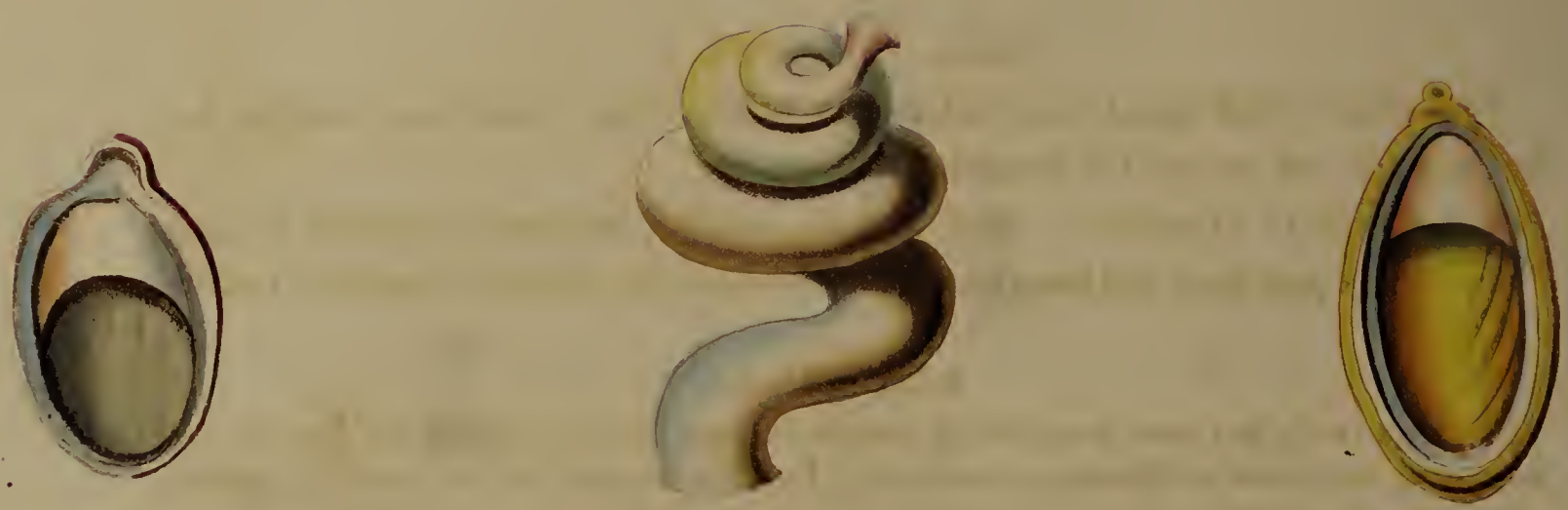
Genus. DENTALIA.

Character. *Shell* tusk-shaped, pointed; the *mouth* round and wide, placed at one end; the *body* sometimes fluted, and ornamented with a few cross bands or ligaments.

No. 3. DENTALIA VIRIDIS. *Shell* green having longitudinal stripes, strongly indented or raised from the body. A native of the South Seas.

No. 4. DENTALIA BANDATA. *Shell* of a pale brown colour, banded in the middle; the *mouth* small, and *body* very pointed at the extremity.

No. 5. DENTALIA DENACTA. *Shell* pale brown, having shortened longitudinal flutes placed near to the mouth, and parallel to each other. A native of the Eastern Ocean.



PROSCENULA. SERPULA.

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UNIVALVES.

PLATE LIII.

Genus. OVULA.

Character. *Shell,* spire short and involved; *body* oval; the opening of the *mouth* narrow, and reaching the whole length of the shell, having no teeth like those of the Cypræa, on the body and mouth; an open channel or beak standing at each end of the shell.

Species.

No. 1. Ovula alba. *Shell* of a white colour, egg-shaped; *mouth* of a dark brown, oblong, and longitudinal, pointed at each end, undulated on the body and cheek, and of an irregular form. A native of New Zealand.

No. 2. Ovula pharetra. *Shell* pale red, streaked with red; *mouth* yellow, swelling out at the bottom, and taper at each end; *body* strongly tuberculated. This shell is found only in the Asiatic Seas.

No. 3. Ovula aspera. *Shell* oblong at each end, elegantly striped across with red veins; the *mouth* yellow. Native place unknown. From a shell in the British Museum.

Genus. PROSCENULA.

Character. *Shell* flattened, hollow, having a proscenium, or small platform, placed on the under side, in the manner of a stage; the outer side of the shell rounded, or pointed like a shield.

No. 1. and 2. Proscenula viridis. *Shell* green and white on the under side, of an oval form, and something resembling a Patella. Native place unknown.

No. 3. Proscenula grisea. *Shell* gray, yellow within, except the stage, which is white. Native place unknown.

No. 4. Proscenula nucleata. *Shell* pale brown; the *mouth* orange colour, the stage white. A native of the South Seas. From a specimen in the British Museum.

Genus. SERPULA.

Character. *Shell* spiral, involved, twisted like a worm, sometimes straight, hollow at each end, unequal in breadth, and irregular.

No. 1. Serpula variegata. *Shell* smooth, circular, involved, irregular in form, of a pale gray and brown colour. Found in the islands in the West Indies.

REMARKS.

The genus Ovula has been described by Bruguière, and the characters of the Serpula have been ably laid down by Pennant, as well as by Linnæus himself, and are easily distinguishable at the first sight.

The genus Proscenula is now described for the first time, and differs from the Patella in the construction of its inner stage or membrane; its species are very numerous, which makes it rather extraordinary, that no one should have described it before. It also bears considerable analogy to the genus Haliotis in its general form.

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UNIVALVES.

PLATE LIV.

Genus. MUREX, &c.

The following Plate is intended more particularly to point out the natural distinctions of the genus Murex, when compared with the Pyrula and Pleurotoma; for this purpose, and to make the difference of their form more obvious, five curious shells of opposite shapes are herewith represented, and which may tend to make the system by which they are divided, much more intelligible.

Species.

No. 1. PYRULA UNDULATA. *Shell* of a pale red, marked transversely with wavy sutures; *mouth* slightly marked with flutes, and the *spire* rounded and furrowed. Native place unknown.

No. 2. MUREX RUBICUNDA. *Shell* of a dark red; the *mouth* broad, angular; *columella* slightly fluted; *spire* angulated and tuberculous.

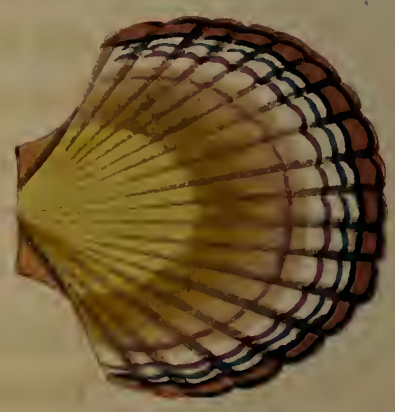
No. 3. MUREX LINEATA. *Shell* brown, marked all over with a band consisting of two lines similar to threads; the *spire* angular and tuberculous; the *mouth* broad and angular, of a square shape. A native of the West Indies. From the Author's Museum.

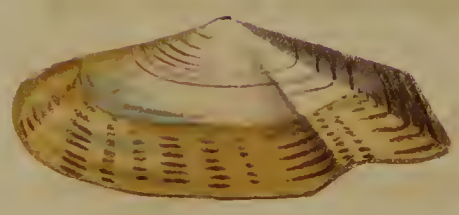
No. 4. PYRULA AUSTRALASIA. *Shell* of an olive green; the *mouth* of a dark brown, rounded; *spire* rounded, streaked within. A native of New Holland and Van Diemen's Land.

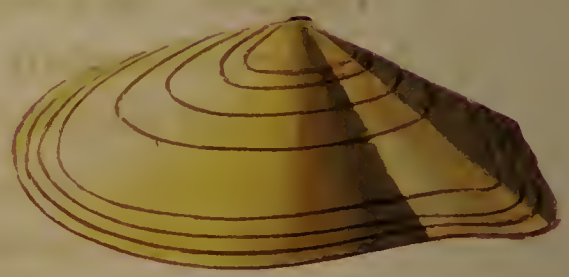
No. 5. PLEUROTOMA ACUTA. *Shell* of a white colour, spotted with square marks; the *spire* divided into hollow channels; the *cheek* of the mouth having a projecting swelling and cavity, which forms the distinguishing character of the Pleurotoma, and by which it differs essentially from the Murex.

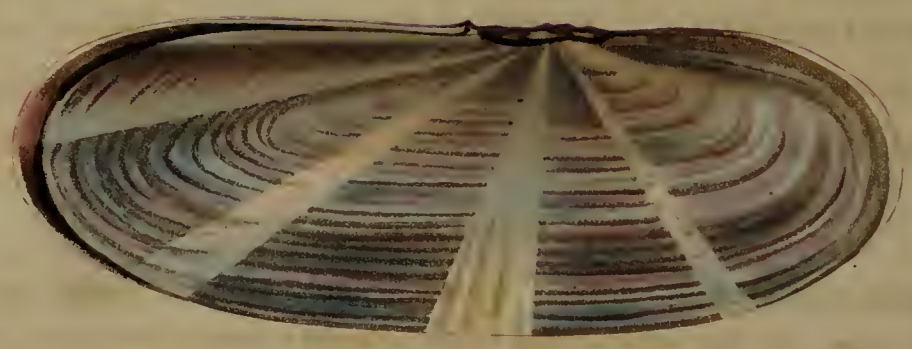
REMARKS.

THERE is no doubt, that upon a transitory view of the shells described in the above Plate, the general resemblance in their forms appears so striking, as almost to lead to a supposition that they are of one genus, which circumstance, however, is to be explained only in the following manner. The Murex genus has a pointed and rocky appearance in the form of the body and spire; the Pyrula, on the contrary, has a rounded body and spire, and ending also in a more circular termination. Of the peculiarities of the Pleurotoma, perhaps sufficient remarks have already been made in the description of that curious genus, and which the present comparison of forms may serve in some degree farther to elucidate.









BIVALVES.

PLATE LV.

Genus. PECTEN.

Character. *Shell,* the *valves* of unequal size and shape, sometimes convex, in other cases concave; ribs, or striæ, running from the centre, radiated, at the hinge one or two angular flaps or arms projecting; the *hinge* without teeth, and having a small triangular cavity aurated.

No. 1. PECTEN CONCAVUM. *Shell* red, and richly veined with dark irregular veins; the striæ party-coloured, amber and red. This elegant shell is brought from the Red Sea, and is delineated from a specimen in the Collection of Lord Valentia.

No. 2. PECTEN DIGITATUM. *Shell* amber colour, having a dark blue border; striæ strongly marked and decussated. A native of Amboyna and the Eastern Seas.

No. 3. PECTEN DISCOLORATUM. *Shell* party-coloured, red, blue, yellow, and green. Found in the Mediterranean Sea.

No. 4. PECTEN FLAVESCENS. *Shell* of a bright yellow, shaded with alternate circles of bright red. From a shell in the British Museum. Its native place is at present unknown.

Genus. TELLINA.

Character. *Shell* sloping, or unequally curved on one side, convex above and below, striated circularly; *hinge,* three teeth inserted, the lateral teeth in one valve flat, or nearly obsolete.

No. 1. TELLINA NITIDA. *Shell* of a pale red, veined with yellow and blue, indented on one side, on the other side rounded. Native of the seas of Barbary and the Mediterranean.

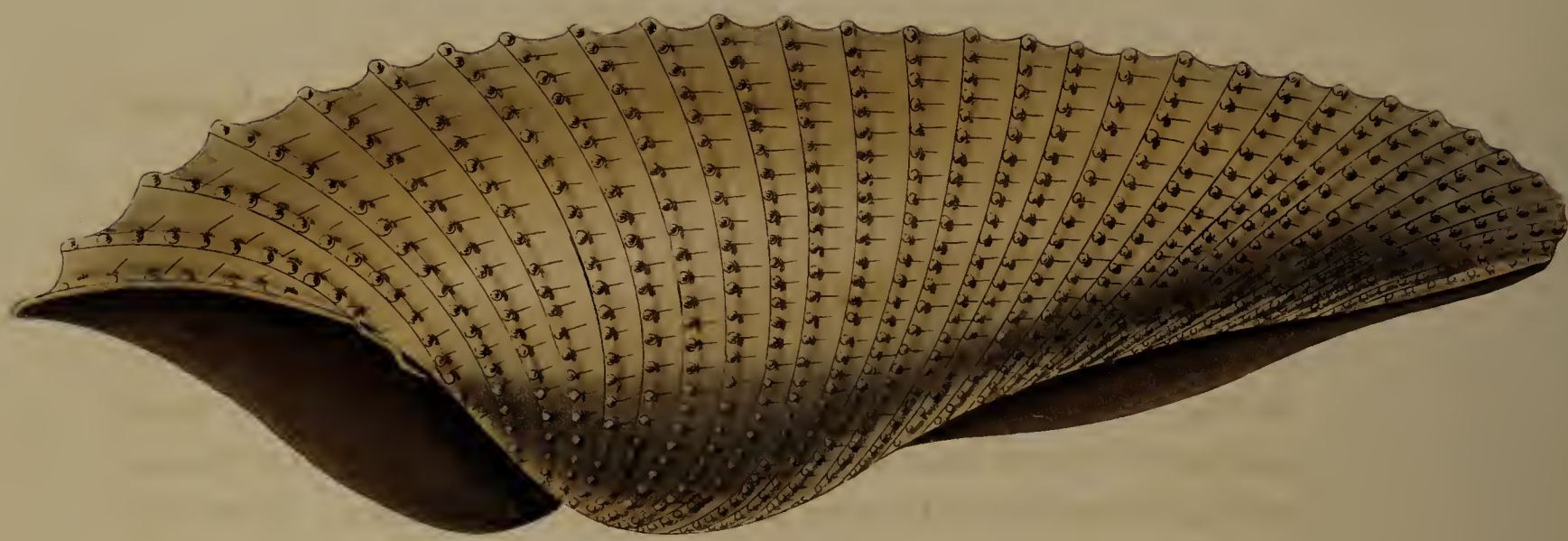
No. 2. TELLINA AUREA. *Shell* of a bright gold colour, having seven circular lines of red, running round in parallel circles. Native place unknown.

No. 3. TELLINA VESPERTINA. (So called from its resemblance to the setting sun.) *Shell* purple, radiated with white rays irregularly. This magnificent shell is found in the Eastern Seas. From a specimen in Mr. Spence's Museum.

REMARKS.

THE genus Pecten was at first classed by the great Linnæus under the family Ostræa or Oyster; but as most of the succeeding Conchologists have chosen to separate it, I have adopted the same mode, and have taken the definition from Mr. Montague, the Author of a learned and elaborate Work upon the British Shells.

The genus Tellina is adopted from the Linnæan character, which is of itself, indeed, sufficiently obvious.



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MYA.

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BIVALVES.

PLATE LVI.

Genus. PHOLAS.

Character. *Shell* ovate, diminishing, unequally gaping at the ends, umbonated, having four operculatory valves fixed near the hinge; the outside tuberculous.

Species.

No. 1. and 2. Pholas marmoratus. *Shell* of a pale brown colour, richly ornamented with waved ridges, diversely striated; the *hinge* joined by four oblong and pointed valves. This singular and elegant shell is found inclosed in rocks of stone and sometimes of marble on the coasts of France, near Quiberon, also in Italy not unfrequently in a fossil state. It has been a perplexing enquiry to Naturalists at all times, and hitherto an unsuccessful one, by what principle shell-fish are enabled to penetrate the solid substances of rock, wood, marble, and flint: after much examination it appears most likely to be effected by some acid fluid which the animal has the power of using as a solvent for the above substances. As it is not supposed that these substances constitute the principal part of their food, we are quite at a loss to conjecture why they seek a secluded situation; it may, perhaps, be for the purpose of affording security to their offspring during a certain period of their growth.

No. 3. The side view of the above shell, shewing the opening and hinge.

Genus. MYA, or SHIELD-SHELL.

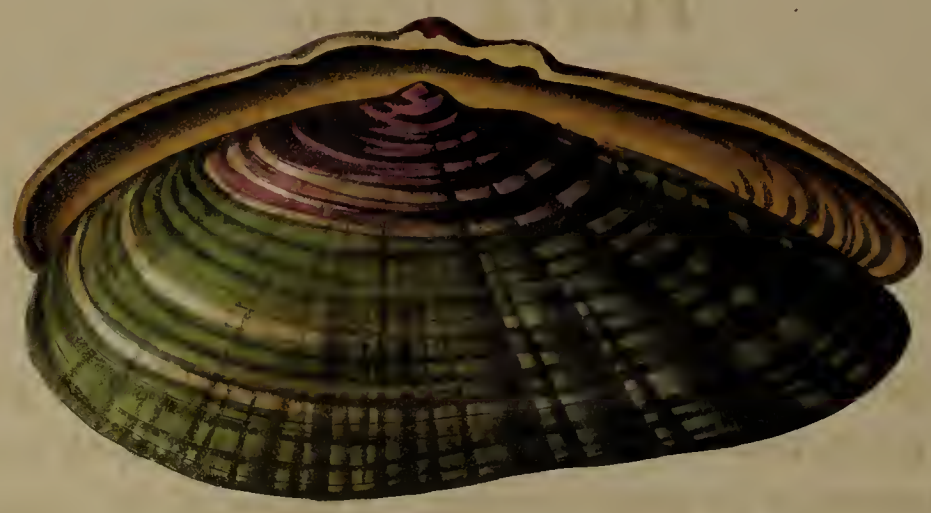
Character. *Shell* sometimes deeply striated, and umbonated like a shield, one extremity or end gaping, the other closed, the first tooth solid, thickened, and not inserted into the opposite shell.

No. 1. Mya particolor. *Shell* barred with red and purple veins, in round and spreading shape. Supposed to be a native of the East Indies. From the original in the British Museum. Very rare.

No. 2. Delineation of the *hinge* of the same shell.

REMARKS.

The genera Pholas and Mya bear a distant resemblance to each other, in many respects: the former may be always sufficiently distinguished by the singular form of its hinge, which differs from all others at present known. It is sometimes found, like the Teredo, inclosed in logs of wood, or old trees, which have fallen into the sea. The Mya has a very considerable resemblance to the ancient shield said by Plutarch to have been borne by the Amazons. It is also remarkable by having a gaping or opening at one end, and being closed in front. Several species of this genus are found in a fossil state in Berkshire and Hampshire, but different in form from all the recent ones hitherto discovered.



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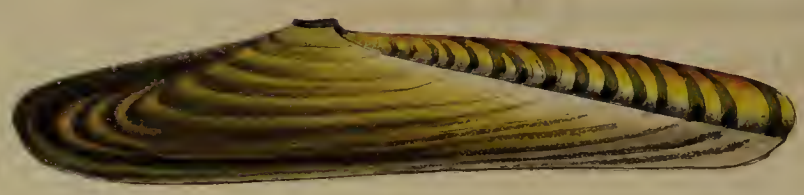

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CARDIUM.

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BIVALVES.

PLATE LVII.

Genus. SOLEN.

Character. *Shell* oblong, and gaping on each side; *tooth* concealed, not inserted into the opposite shell; the lateral margin smoothed off.

Species.

No. 1. SOLEN VIRIDE. *Shell* green without, white and red within, party-coloured red and green, oval shaped and flattened, kidney shaped, the ends terminating unequally in respect to size. A native of the Asiatic Seas and Coasts.

No. 2. SOLEN ANGULATUM. *Shell* olive coloured, and marked with longitudinal green veins, long and tapering from the hinge each way. A native of the Coasts of Spain. From a shell in the collection of Mr. Bullock.

No. 3. SOLEN FLAMMEUM. *Shell* of a bright red and orange colour, oval and rounded, richly marked with scarlet streaks and spots. From the African Seas.

No. 4. SOLEN LEGUMEN. *Shell* of a rich brown colour, streaked across with dark veins, ends rotundate, in form slightly angular and curved, in the manner of a scythe. A native of the Coast of Sierra Leone.

Genus. CARDIUM.

Character. *Shell* equilateral, equivalve, generally heart-shaped; the *hinge* having two teeth, the side teeth inserted remote.

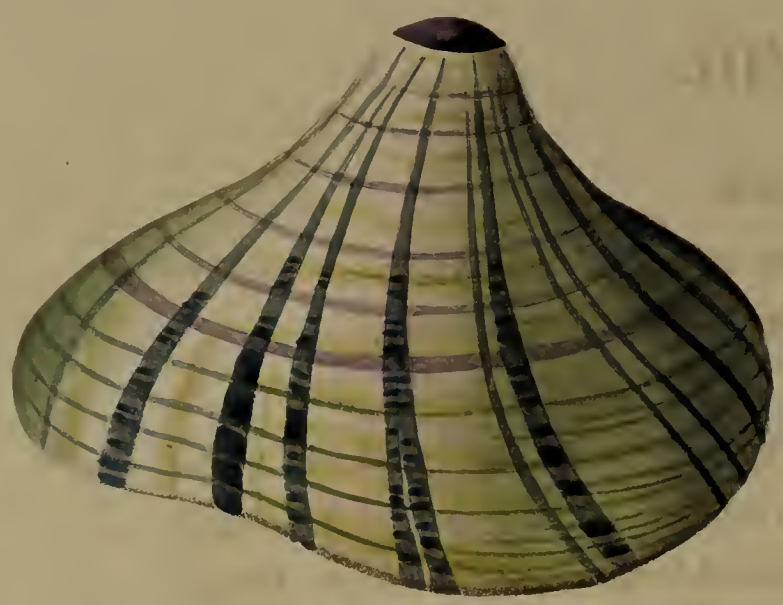
No. 1. CARDIUM CRUENTUM. *Shell* heart-shaped and pointed; the *body* richly variegated with red spots, the valves nodding to each other, leaving a hollow recess underneath the hinge. From a shell in the Collection of Mr. Bland.

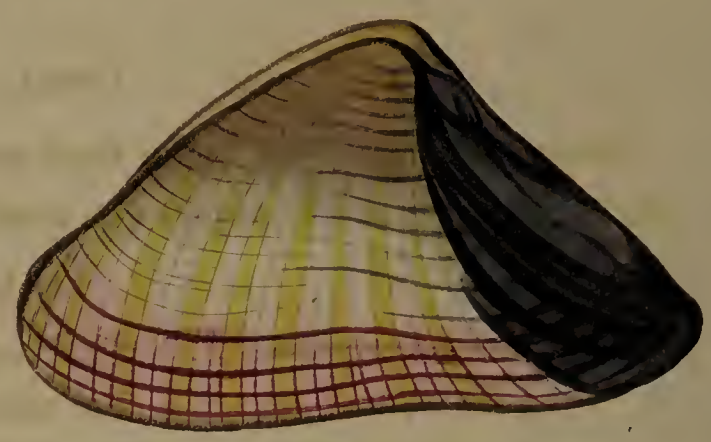
No. 2. CARDIUM COSTATUM. *Shell* of a pale brown, with white ribs of different sizes, having yellow bands inserted between each; the ribs angular, pointed, and projecting.

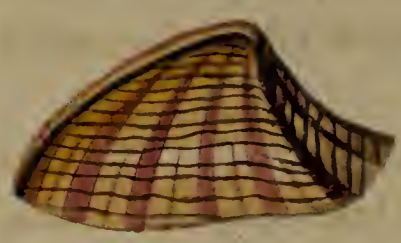
No. 3. CARDIUM FRAGUM. *Shell* white, shaded, and spotted with brown, flattened and angular in its general form, with narrow projecting ribs placed irregularly. A native of the American Seas.

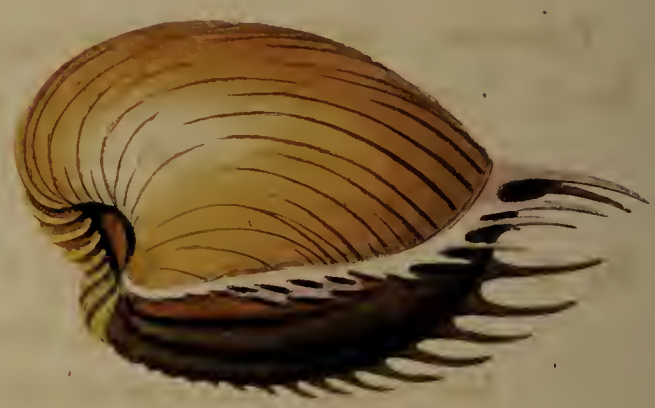
REMARKS.

THE genera Solen and Cardium are essentially distinguished by the different form of the hinge, and the thin transparent character of the former, the Cardium being generally very thick and strong, and more rounded in its shape. In this last genus is comprehended the Cockle, so familiarly known that it needs no particular description. The Cardium is frequently found in a fossil state, in beds of clay or slate in the interior parts of England and France, but no instance has hitherto occurred of the Solen in a fossil state, which, however, is very plentiful in a recent state, upon all the European coasts, under the name of the Razor Bill. As it differs very much in the varieties of its external form, there might be, perhaps, no impropriety in forming it into two different families according to its shape; but till the knowledge of Nature becomes more extended, we shall find the Genera of Linnæus the most illustrative and comprehensive.









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BIVALVES.

PLATE LVIII.

Genus. DONAX.

Character. *Shell* having the front margin very much thickened; the *hinge* having two teeth, also a marginal one standing under the posterior opening.

Species.

No. 1. Donax variegata. *Shell* angular, slightly laminated, marked, transversely, with bars of a blue colour, upon a light yellow ground. This shell is supposed to be very rare, and is delineated from a specimen in the British Museum, amongst those presented to it by Mr. Cracherode.

No. 2. Donax crenata. *Shell* of a pale yellow, with a reddish edge in the front, furrowed all over with narrow ridges, the general form triangular. Native place unknown.

No. 3. Donax sulcata. *Shell* white, having transverse bars of red; the *hinge* end much incurvated, or bent upwards. From a shell in the Author's Museum.

Genus. VENUS.

Character. *Shell,* the front lips projecting, three teeth, approximate, diverging.

No. 1. Venus furbellata. *Shell* of a pale pink colour, having five deep ridges near the outer edge, slightly undulated. Found in the South Seas, and New Holland.

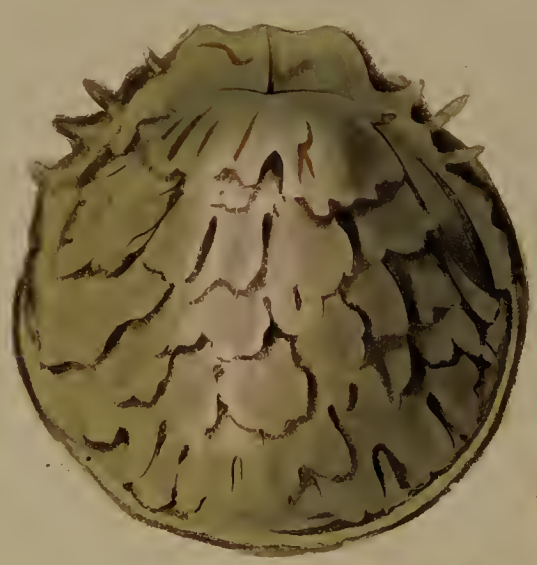
No 2. Venus radiata. *Shell* of a pale red colour, having seven or more ridges furbelowed and sinuated, armed at the edge with twisted spines projecting like horns. This curious shell is a native of New Zealand.

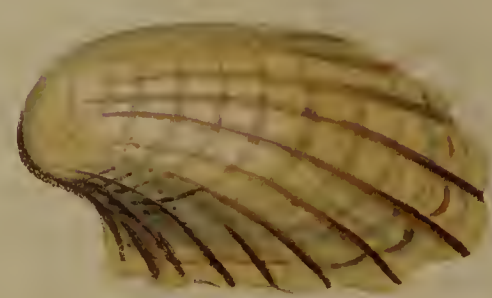
No. 3. Venus disjecta. *Shell* of a pale red, and ramified.

REMARKS.

The genera Donax and Venus bear a very considerable resemblance to each other in their external form, having a deep notch or indentation placed close under the hinge. The difference of the teeth, however, and their internal arrangement, is found sufficient, according to the classical arrangement of Linnæus, to separate them completely.

The present arrangement of the Bivalve shells upon the principles of that great Writer, depending much upon the internal structure of the hinge, may perhaps in future make it necessary to enlarge very much the number of these genera, as new species are almost daily discovered and brought from the southern regions of the globe, which differ in the character or number of the teeth from all those at present known. For the present, therefore, we have adopted the Linnæan arrangement, omitting the genus Mactra, of later Writers, which we conceive requires farther investigation, and which would lead to particulars not connected with the plan of the present Work, which, in respect to the Bivalves, must necessarily be much abridged and concise in its definitions.





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BIVALVES.

PLATE LIX.

Genus. SPONDYLUS.

Character. *Shell* shaped like an ear, underneath rough, and covered with spines; two teeth bent backwards, with an intermediate hollow space.

Species.

No. 1. SPONDYLUS IMBRICATUS. *Shell* of an olive green, rough, and invested with folds and ridges like the tiles of a house, and having a few spines near the hinge. From a specimen in the Author's Museum.

No. 2. SPONDYLUS SPINOSUS. *Shell* of a pale red, streaked circularly with dark red; the *spines* very numerous and blunted at the ends, projecting far out, and covering the whole surface. This shell is found in the East Indies, and though very rough in its external form, is nevertheless elegant in its appearance. From a specimen in Mr. Bullock's Museum.

No. 3. SPONDYLUS DIGITATUS. *Shell* of pale pink colour, invested with white ribs, digitated, or shaped in the manner of fingers. This shell is supposed to be very rare, and is of a curious and singular shape. From a shell in the Museum of Mr. Hankinson.

Genus. CHAMA.

Character. *Shell* thickened; *hinge* strong, placed in a crooked opening.

No. 1. CHAMA LAZARUS. *Shell* imbricated and spinous, with very deep ridges inserted longitudinally. Linnæus, with his usual want of delicacy, has named it Lazarus, from its resemblance to a sore, infested with proud flesh, a denomination certainly more ingenious than agreeable. It is a native of the East Indies.

No. 2. CHAMA CIRCULARIS. *Shell* of a pale red colour, invested with spines, pointed and depressed. This shell is rare, and a native of the South Seas. From a specimen in the Museum of Dr. Lettsom.

No. 3. CHAMA COSTATA. *Shell* of a pale red colour, the edges fluted and decussated. From a shell in the Author's Museum. Native place unknown.

REMARKS.

THE genera Spondylus and Chama have, in general, a considerable external resemblance, the difference consisting almost entirely in the character of the hinge. The forms of the upper and under shell of each of these species, differ very much from each other; sometimes the lower shell is much larger, and receives the upper one in the manner of a cradle or nest. This is also the case with some of the rarer species of Pectens, to which shell the Spondylus has an analogy, having a small kind of wing placed near the hinge, and only upon the lower shell. These shells are found chiefly in the warmer climates of the globe, and form a numerous assemblage, the greatest variety of which, in one collection, may perhaps be seen in the Museum of the late Mr. Cracherode, now united to that most invaluable repository, the British Museum.

OSTREA. ANOMIA.

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BIVALVES.

PLATE LX.

Genus. ARCA.

Character. Shell, valves of an equal size, having a square elbow at one end, and round at the other; *hinge* having numerous teeth sharpened, and placed alternately.

Species.

No. 1. ARCA ELEGANS. *Shell* of a pale red, white and blue within, the outer edge undulated. A native of Sierra Leone and the Gold Coast. From a shell in the Author's Museum.

No. 2. ARCA RUBRA. *Shell* of a strong red colour, streaked with red veins, the inside of a pale gray; the two shells being delineated together, convey to the mind an idea of Noah's Ark, being formed like a ship in the lower part, and covered over at the top, from which circumstance it is supposed this shell received its name.

Genus. OSTREA.

Character. Shell, externally hollowed out, imbricated, and rugged; the *valves* unequal in size, hollowed out in the manner of an ear. The *hinge* having teeth slightly marked.

No. 1. OSTREA DENTATA. *Shell* brown, lined with white and blue shades; the upper shell small, and of a flesh colour; this shell differs in form, in many respects, from the common oyster, particularly in its branched sides. It is a native of the East Indies.

Genus. ANOMIA.

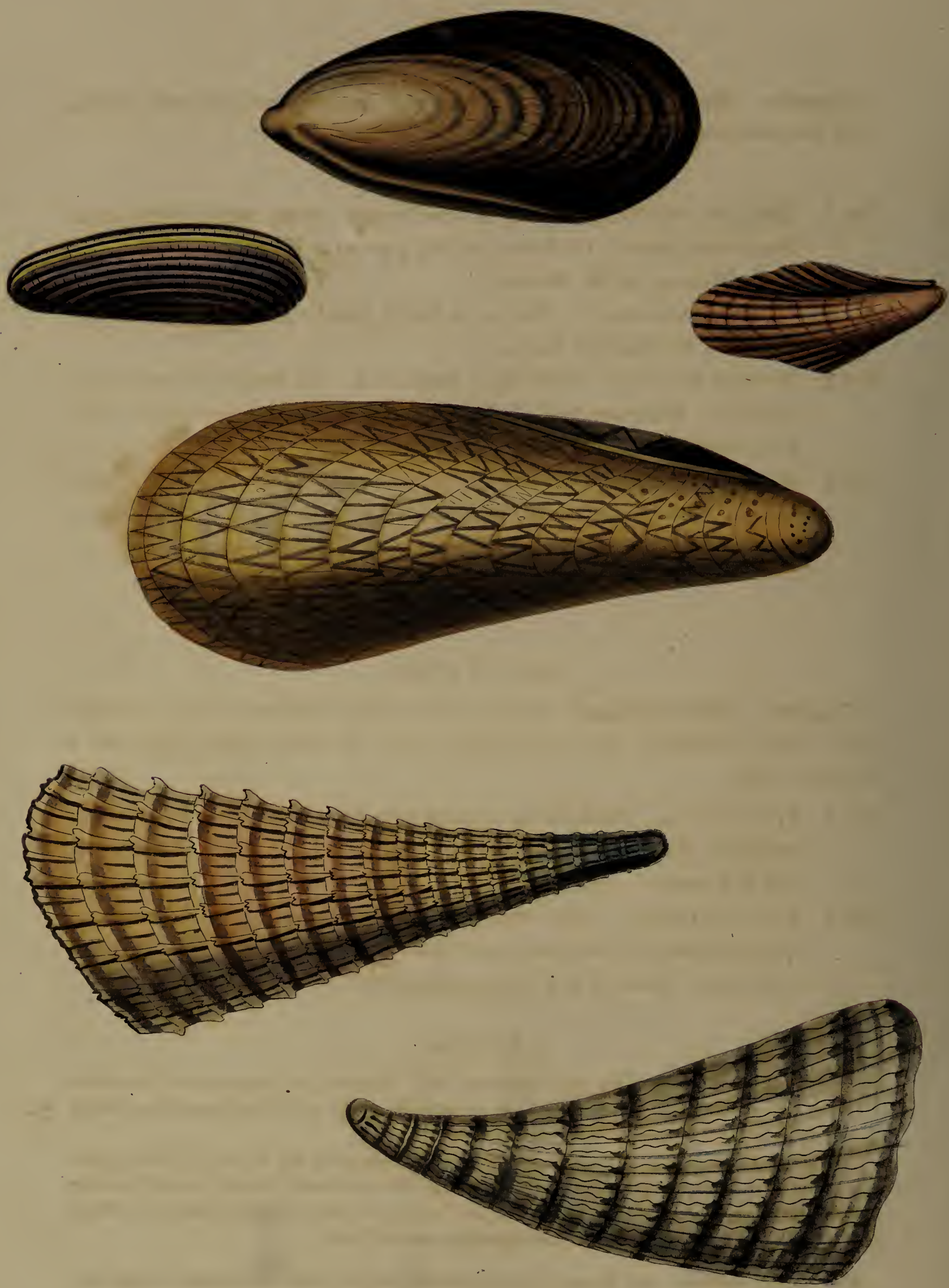
Character. Shell, the *valves* unequal in size, one more rounded in the base than the other; sometimes one of the valves has a round hole near the hinge; *hinge* having only a lineal channel or ridge, but which is confined to that part.

No. 1. ANOMIA OVATA. *Shell* of a pale brown, oval, having a circular opening near the hinge; by passing a muscular membrane through this hole, the animal is supposed to attach itself to the rocks at the bottom of the sea.

No. 2. ANOMIA UNDULATA. *Shell* of a sinuated form, and gibbous below. A native (as well as the foregoing) of the Seas of the East Indies.

REMARKS.

THE genus Arca is well worthy the accurate examination of the skilful Conchologist, from its very singular construction, the teeth of the hinge slanting different ways; it seems to have a distant analogy to the genus Pecten, from which, however, its oblong and smoother form will always distinguish it. The Ostrea, or Oyster, is too well known to need any particular explanation. The Anomia is deserving of very particular attention, on account of Linnæus having supposed that fossil shells of this genus were to be found in shape and character exactly agreeing with the recent ones, to which he has given the same name. This was, however, one of the accidental errors of that great Naturalist, for, although they may agree in the generic character, yet in their exact specific shape, a constant difference occurs. In the examination of forty-five different fossil Anomiæ found in Derbyshire and other parts of England, I did not find one of them to agree perfectly in shape with any living species.



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BIVALVES.

PLATE LXI.

Genus. MYTILUS.

Character. *Shell* unequally oval and rounded; the *hinge* without teeth, divided by a line excavated longitudinally.

Species.

No. 1. MYTILUS STRIATUS. *Shell* of a dead brown colour, mixed with purple lines closely placed, the form oval, but pointed at the hinge. From a shell in the Museum of Mr. Bullock.

No. 2. MYTILUS LYCOPHAGUS. *Shell* of a bright purple, and richly barred with transverse longitudinal bands.

No. 3. MYTILUS DENACTUS. *Shell* of a bright red, with transverse bands, and crenated. From the Author's Museum, and supposed to be a native of the East Indies.

No. 4. MYTILUS PICTUS. *Shell* large, of a pale pink colour, and richly ornamented, with conical veins, and spotted near the *hinge*. This shell is generally found in the different Islands of the Eastern Seas.

Genus. PINNA.

Character. *Shell* triangularly shaped, covered with rough scales, and sometimes with a hairy substance; the *hinge* without teeth; the shells held together by a muscular valve.

No. 1. PINNA DETUSA. *Shell* oblong, covered with sharp pointed ridges, circularly arranged; the *shell* thin and brittle. A native of the Island of Guernsey and of France.

No. 2. PINNA DEFLECTA. *Shell* triangular, inflected, of a pale gray colour, adorned along the back and sides with undulated streaks, ending in small tubercles. This shell is also semitransparent. Native place unknown.

REMARKS.

THE genus Mytilus is one of the most important of the Bivalves, as it furnishes in the muscle, a useful article of food; and if it were not so common upon our Coasts, would no doubt be highly valued.

The genus Pinna is chiefly found in the greatest abundance in the warmer climates of the globe, and has a distant resemblance to those baskets of wicker-work in which salt is generally packed; they are said to be frequently used, in a scarcity of fish, in the Islands of the West Indies, and found to be a delicious and agreeable sort of food.

The Chiton, Sabella, and Lepas, are not inserted in this work, for reasons which have been already alluded to in the Introduction; and the Pholas is placed with the Bivalves, from its analogy with that class of shell-fish, although its mode of life is in some respects very different.

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☞ Those genera marked thus (*) are adopted from Linnæus; those (†) from Bruguière and Lamarck; and those (‡) are now first invented and adopted by the Author of this work.

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